KF26
.A45
1996b 104

S. HRG. 104–713, PT. 2

Senate Hearings

Before the Committee on Appropriations

Y 4. AP 6/2: S. HRG. 104-713/
PT. 2
Agriculture, Rural Development, and...

Agriculture, Rural Development, and Related Agencies Appropriations

Fiscal Year 1997

104*th* CONGRESS, SECOND SESSION

H.R. 3603

DEPOSITORY
MAR 19 1997
BOSTON PUBLIC LIBRARY

PART 2 (Pages 1–258)
NONDEPARTMENTAL WITNESSES

S. Hrg. 104–713, Pt. 2

AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1997

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

ONE HUNDRED FOURTH CONGRESS

SECOND SESSION

ON

H.R. 3603

AN ACT MAKING APPROPRIATIONS FOR AGRICULTURE, RURAL DEVELOPMENT, FOOD AND DRUG ADMINISTRATION, AND RELATED AGENCIES PROGRAMS FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1997, AND FOR OTHER PURPOSES

PART 2 (Pages 1–258)

Nondepartmental witnesses

Printed for the use of the Committee on Appropriations

U.S. GOVERNMENT PRINTING OFFICE
23–976 cc
WASHINGTON : 1997

For sale by the U.S. Government Printing Office
Superintendent of Documents, Congressional Sales Office, Washington, DC 20402
ISBN 0-16-053983-8

COMMITTEE ON APPROPRIATIONS

MARK O. HATFIELD, Oregon, *Chairman*

TED STEVENS, Alaska
THAD COCHRAN, Mississippi
ARLEN SPECTER, Pennsylvania
PETE V. DOMENICI, New Mexico
CHRISTOPHER S. BOND, Missouri
SLADE GORTON, Washington
MITCH McCONNELL, Kentucky
CONNIE MACK, Florida
CONRAD BURNS, Montana
RICHARD C. SHELBY, Alabama
JAMES M. JEFFORDS, Vermont
JUDD GREGG, New Hampshire
ROBERT F. BENNETT, Utah
BEN NIGHTHORSE CAMPBELL, Colorado

ROBERT C. BYRD, West Virginia
DANIEL K. INOUYE, Hawaii
ERNEST F. HOLLINGS, South Carolina
J. BENNETT JOHNSTON, Louisiana
PATRICK J. LEAHY, Vermont
DALE BUMPERS, Arkansas
FRANK R. LAUTENBERG, New Jersey
TOM HARKIN, Iowa
BARBARA A. MIKULSKI, Maryland
HARRY REID, Nevada
J. ROBERT KERREY, Nebraska
HERB KOHL, Wisconsin
PATTY MURRAY, Washington

J. Keith Kennedy, *Staff Director*
Mark Van de Water, *Deputy Staff Director*
James H. English, *Minority Staff Director*

Subcommittee on Agriculture, Rural Development, and Related Agencies

THAD COCHRAN, Mississippi, *Chairman*

ARLEN SPECTER, Pennsylvania
CHRISTOPHER S. BOND, Missouri
SLADE GORTON, Washington
MITCH McCONNELL, Kentucky
CONRAD BURNS, Montana
MARK O. HATFIELD, Oregon
ex officio

DALE BUMPERS, Arkansas
TOM HARKIN, Iowa
J. ROBERT KERREY, Nebraska
J. BENNETT JOHNSTON, Louisiana
HERB KOHL, Wisconsin
ROBERT C. BYRD, West Virginia
ex officio

Professional Staff
Rebecca Davies
Hunt Shipman
Galen Fountain (Minority)

Administrative Support
James B. Reynolds

CONTENTS

Page
Agricultural Systems for Environmental Quality 1
American Association of Nurserymen 4
American Association of Retired Persons 9
American Farm Bureau Federation 12
American Federation of Government Employees 16
American Forest and Paper Association 19
American Honey Producers Association, Inc 23
American Indian Higher Education Consortium 24
American Sheep Industry Association 29
Association of Research Directors, Inc 33
California Farm Bureau Federation 35
California Industry and Government Coalition on PM–10 38
Center on Hunger, Poverty and Nutrition Policy 41
Centocor, Inc 43
Children's Nutrition Research Center 46
Coalition of EPSCoR, University of Arkansas 50
Coalition on Smoking OR Health 53
Colorado River Basin Salinity Control Forum 56
Colorado River Salinity Control Program 57
Colorado State University 58
Consortium for International Earth Science Information Network 60
Council for Agricultural Research, Extension, and Teaching 63
Defenders of Wildlife 66
1890 Land-Grant Colleges and Universities 70
FDA Council 73
Florida State University 76
Fond du Lac Band of Lake Superior Chippewa 78
City of Gainesville, FL 80
Georgetown University Medical Center 81
Holden's Foundation Seeds, Inc 82
Human Nutrition Research Center on Aging, Tufts University 85
Humane Society of the United States 88
Illinois Groundwater Consortium 91
University of Illinois:
    Statement of Dennis Campion 95
    Statement of Peter J. Barry 96
    Statements of James J. Stukel 99, 102
    Statement of Naomi B. Lynn 104
International Association of Fish and Wildlife Agencies 109
Livestock Marketing Association 114
Lummi Indian Business Council 115
Metropolitan Water District of Southern California 116
National Association of Conservation Districts and National Association of State Conservation Agencies 117
National Association of State Foresters 120
National Association of State Universities and Land-Grant Colleges:
    Statement of Dr. Charles B. Browning 123
    Statement of Dr. Milo J. Shult 130
    Statement of Dr. Hiram D. Palmertree 132
    Statement of Dr. Paul D. Hummer 135
    Statement of Dr. Francille M. Firebaugh 138
    Statement of Dr. James P. Lassoie 141
National Association of Wheat Growers 145
National Center for Resource Innovations 150
National Citrus Research Council 153

Page
National Cooperative Business Association 155
National Cotton Council of America 157
National Easter Seal Society 162
National Oat Improvement Committee 166
National Potato Council 167
National Rural Housing Coalition 171
National Rural Telecom Association 175
National Rural Water Association 179
National Telephone Cooperative Association 184
National Utilities Contractors Association 187
National Watershed Coalition 190
National Water Resources Association 194
Northwestern University 195
The Oceanic Institute 198
Organization for the Promotion and Advancement of Small Telecommunications Companies 199
Organization of Professional Employees of the Department of Agriculture 202
Pharmaceutical Research and Manufacturers of America 205
Regional Aquaculture Centers:
  Statement of Dr. Kevan L. Main 207
  Statement of Lester W. Myers 209
  Statement of Dr. Richard Spencer 210
  Statement of Dr. Robert Rheault 212
  Statement of Dr. Ted R. Batterson 213
  Statement of Dr. C.G. Shepherd 214
The Rural Coalition/Coalición Rural 216
Rutgers, the State University of New Jersey:
  Statement of Francis L. Lawrence 222
  Statement of Timothy M. Casey 224
  Statement of Richard L. Guest 228
San Diego County Water Authority 232
Soil and Water Conservation Society 233
University of Southern Mississippi 237
Southwest Animal Health Research Foundation 240
Tarrant County Water Control and Improvement District 241
Turfgrass Producers International 243
Texas A&M University 244
Texas Tech University 247
U.S. Agricultural Export Development Council 250
United States Telephone Association 253
The Wildlife Society 256

AGRICULTURE, RURAL DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1997

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

NONDEPARTMENTAL WITNESSES

The following testimonies were received by the Subcommittee on Agriculture, Rural Development, and Related Agencies for inclusion in the record. The submitted materials relate to the fiscal year 1997 budget request for programs within the subcommittee's jurisdiction.

AGRICULTURAL SYSTEMS FOR ENVIRONMENTAL QUALITY

PREPARED STATEMENT OF NEWELL KITCHEN AND TONY PRATO, UNIVERSITY OF MISSOURI-COLUMBIA

Introduction

This testimony is submitted by Newell Kitchen, Professor of Soil Science and Tony Prato, Professor of Agricultural Economics, of the University of Missouri-Columbia on behalf of the Agricultural Systems for Environmental Quality (ASEQ) program. ASEQ is a systems-oriented national research and education program developed by a coalition of more than 200 university and federal researchers and educators from 14 states. The goal of the ASEQ program is to develop profitable and socially acceptable agricultural systems that reduce the impacts of agricultural production on our Nation's precious soil, water and air resources.

USDA Water Quality Program

ASEQ has its roots in USDA's Water Quality Program which was established in 1989 with strong bipartisan support from Congress. The goal of the Water Quality Program is to provide farmers and ranchers with the knowledge, technical means and financial assistance to respond independently and voluntarily in addressing farm-related environmental concerns and related state water quality requirements. The objective of the program is to determine the relationships between agricultural activities and water quality, and advocate improved management systems.

The Water Quality Program consists of three sub-programs: demonstration sites, hydrologic unit areas and research. The objectives of the first two sub-programs are to: a) advise and assist in the implementation of known agrichemical management and agricultural production systems that enhance water quality; b) induce the adoption of appropriate water quality enhancement or protection systems at significant levels in problem areas. The objective of the research sub-program is to: a) improve and expand knowledge of technologies and agricultural practices for protecting water quality; b) integrate such technologies and practices into production management systems that are economically and environmentally sound. It is for the research program that we have requested this opportunity to testify.

Water Quality Research Program

The research program consists of two parts—priority component research and systems research. Component research expands our knowledge of specific aspects of the interactions of agricultural chemicals, soils, water and the human dimension: reactions, degradation, persistence, movement and other aspects of physical, biological and social processes. Within the USDA-Cooperative States Research, Education and Extension Service (CSREES), funding for component research is currently through the National Research Initiative (NRI) program.

In contrast, systems research integrates the most promising individual research components into agricultural management systems for improved crop and livestock production. This allows a comprehensive analysis of both economic and environmental impacts within a region. Systems research requires multidisciplinary cooperation and is focused on developing solutions for real world problems. The scale of agricultural systems research is whole fields and watersheds, not just laboratories and plots as is normally found with component research. CSREES has funded systems water quality research under a competitive grants program call the Special Water Quality Grants. Now, university participation in these systems projects is in jeopardy because funding under the CSREES Special Water Quality Grants program has been cut in half each year over the past two fiscal years. The purpose of this testimony is to request restoration of funding into this program in order that researchers at state universities and colleges are able to partner with federal researchers and private companies in developing profitable and environmentally sound agricultural systems.

Management Systems Evaluation Area (MSEA) Program

The systems research effort was initiated as a pilot program in the Midwest that established five Management Systems Evaluation Area (MSEA) projects which included research sites in eight states (Iowa, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Ohio and Wisconsin). The Midwest region was selected for the pilot program because over 80 percent of the corn and 70 percent of the soybeans produced in the United States are grown in the Midwest. Production of these crops requires 58 percent of the nitrogen fertilizer and over 60 percent of the herbicides used in the United States. MSEA projects were selected under a peer-reviewed, competitive grants program. The MSEA research program combines field studies of farming systems at many sites with laboratory studies designed to understand the mechanisms of nitrogen and pesticide fate and movement through soils and water. In this respect, the MSEA program blends basic and applied research.

A unique feature of the MSEA research program is that it utilizes an interdisciplinary, systems approach to agro-environmental problems involving the cooperation of many federal and state agencies. Lead planning, site selection and program implementation for the program were cooperatively accomplished by the combined efforts of two agencies: USDA-Agricultural Research Service and USDA-Cooperative States Research, Education and Extension Service (CSREES) working through land-grant colleges and universities. Approximately 60-80 percent of the total resources for the MSEA program has come through these two agencies. Other cooperating and contributing agencies include US Geological Survey, US Environmental Protection Agency, USDA-Natural Resources Conservation Service and various state agencies. In addition, private agricultural companies have contributed time and equipment to the program.

Benefits of MSEA Program

Congress is to be commended for its vital role in appropriating funds for creation of the MSEA program. The investment made in this program is paying off by generating long-term results that will enable US agriculture to remain profitable and competitive on a worldwide basis while reducing adverse environmental effects of agricultural production. Some of the benefits of MSEA are as follows:

> In Iowa, banding of herbicides and strip intercropping has been successful in lowering herbicide concentrations in shallow ground water and runoff. Ridge-till, no-till, split nitrogen fertilizer applications, applying nitrogen based on results of the late spring soil

> nitrate test and new devices for injecting liquid nitrogen fertilizer have been found to reduce nitrate leaching to shallow ground water.
>
> In Missouri, precision farming methods have been developed which have the potential for reducing nitrogen use in corn by 15 to 50 million pounds annually. About 50 percent of the farmers surveyed at the Missouri MSEA watershed said they now use greater caution in handling and applying pesticides as a result of what they have learned from the MSEA program.
>
> Improved techniques for management of nitrogen and irrigation water have decreased nitrates in ground water in Nebraska's Central Platte Valley and have reduced atrazine concentrations below the maximum allowable for drinking water. Programs to demonstrate more efficient irrigation practices to farmers in Nebraska showed that lowering total irrigation water applications by 10 percent reduced nitrate leaching to ground water.
>
> The Minnesota-Dakotas-Wisconsin (Northern Sand Plains) MSEA sites have shown that, with careful management, corn and soybeans can be grown on sandy soils while keeping herbicide contamination in ground water below EPA drinking water standards. Nitrate levels in ground water at all sites remained the same or decreased. In cooperation with the Anoka Sand Plan Water Quality Demonstration Project, nitrogen fertilizer use in Minnesota's Anoka Sand Plain was reduced by 16 percent.
>
> The Ohio MSEA has determined that the buried valley aquifer underlying its site has not been contaminated by pesticides. Occasionally, nitrate-nitrogen concentrations in this same aquifer exceed the EPA drinking water standard, but do not persist.

In order to achieve clean water, abundant food, and provide a healthy environment, high quality research results from the MSEA program must be transferred and voluntarily adopted. MSEA's research and educational programs provide useful information to varied audiences in and outside the agricultural community. Since inception of the program in 1990, combined efforts have provided more than 700 educational programs, disseminating information to some 50,000 users annually. These activities have increased awareness, demonstrated new and improved technologies and strategies, and encouraged adoption of cropping practices that minimize impairment of the Midwest's water resources. Further, the process of evaluating the impacts of farming practices on ground water has given a clearer understanding of the most significant water and soil quality problems in agricultural watersheds.

ASEQ Program

The research and educational infrastructure established by the MSEA program provides a way to accomplish the program's goals on a long-term basis. For this reason, in 1995, a decision was made to focus this infrastructure on the most critical water quality problems identified during the first five years of the program and to add protection of soil and air resources as a research objective. The scope of the program has been expanded by addressing agro-environmental issues in additional states and regions of the country. Specifically, scientists from Illinois, Indiana, Mississippi, North Carolina, South Carolina and Texas are now involved in agricultural systems research. To emphasize these new priorities and partnerships, the MSEA program was renamed the Agricultural Systems for Environmental Quality (ASEQ) program.

The goals of the ASEQ program are to improve and expand scientific knowledge about the relationships between agricultural production and the quantity/quality of natural resources, and to develop and transfer to farmers and agribusiness new agricultural production systems and practices that are socially acceptable, economically efficient and environmentally sound. Objectives of the ASEQ program are to: a) develop alternative practices and systems for reducing adverse effects of agricultural production on soil, water and air resources; b) evaluate the social, economic and environmental impacts of these practices and systems at the field, farm and watershed scales; c) identify models and decision aids for managing agricultural and natural resource systems and protecting environmental resources; d) assess the effectiveness of public policies and programs in stimulating the adoption of more sustainable agricultural production systems and practice; e) increase the capacity to transfer information on the social, economic and environmental implications of alternative production systems to user groups.

Conclusion

We conclude with three points that underscore the purpose of our testimony.

First, MSEA is a systems research and education program for reducing the impacts of agricultural production on ground water resources in the Midwest. The program has a significant investment, creating a network of people, equipment, institutions, and public/private agencies for sound assessment of environmental impacts of agricultural production. The research and education infrastructure established by the MSEA program has been very successful as evidenced by its long list of scientific and educational accomplishments. Keeping US agriculture profitable and competitive on a worldwide basis while minimizing adverse impacts of agricultural production on the environment provides a strong justification for maintaining this infrastructure.

Second, declining appropriations for the CSREES' special water quality grants program, which funded the MSEA program, are an obstacle to achieving the goals of the ASEQ program. The funding levels for this grants program have decreased from $9 million in fiscal year 1990 to $2.7 million in fiscal year 1996. This amounts to a 70 percent reduction in funding. Funds taken from the special water quality grants program were reallocated to component studies of the water resources assessment and protection research area in the National Research Initiative (NRI) competitive grants program. While component research is important, this reallocation has created an under-funded program for systems water quality research. Funding systems research of the type proposed by the ASEQ program would achieve a more balanced and effective environmental research program for agriculture.

Third, in the interest of achieving the research and education goals envisioned for the ASEQ program, we request Congress to appropriate $5.5 million per year to the special water quality grants program in the CSREES. Restoring the budget to $5.5 million would allow CSREES to fund an interdisciplinary agricultural systems, competitive grants research program that would enable researchers at state universities and colleges, such as those represented by the ASEQ program, to collaborate with federal researchers and private companies in developing agricultural systems that will keep US agriculture competitive while protecting the environment.

We appreciate the opportunity to testify before this committee.

PREPARED STATEMENT OF THE AMERICAN ASSOCIATION OF NURSERYMEN

Mr Chairman, the American Association of Nurserymen (AAN) welcomes this opportunity to present the nursery industry's views regarding the Fiscal Year 1997 (FY97) Budget for the U.S. Department of Agriculture (USDA).

AAN is the national trade association for the nursery and landscape industry. AAN represents 2,200 production nurseries, landscape firms, retail garden centers and horticultural distribution centers, and the 16,000 additional family farm and small business members of the state and regional nursery and landscape associations.

ECONOMIC STATURE OF THE NURSERY INDUSTRY

According to USDA's Economic Research Service (ERS), the nursery and greenhouse industry remains the fastest growing agricultural sector in cash receipts. In 1969, an estimated 18,000 farms (or 1 percent of all farms) were engaged in producing at least some nursery and greenhouse crops. By 1992, an estimated 47,425 farms were included in this sector. In 1994, nursery and greenhouse crops totaled an estimated $10.04 billion in farm-gate value, representing 11 percent of the total cash receipts for all U.S. farm crops.

Nursery and greenhouse crops in 1994 ranked 6th in total grower cash receipts among all agricultural commodities. It is the third largest farm crop -- behind corn and soybeans, but ahead of wheat, cotton, and tobacco. Nursery and greenhouse crop production now ranks among the top 5 agricultural commodities in 27 states, and among the top 10 in 43 states. USDA data from 1990 also found that nursery and greenhouse farms had the highest average net farm income of all agricultural commodity groups at $53,589. This was four times higher than the average American net farm income in 1990 of $13,458. Although nursery farms can be profitable, they are often more capital intensive than other agricultural operations, and are very labor intensive given the thousands of different plant species and the wide-ranging sizes in which they are grown.

These impressive figures become even more so when one considers that unlike so many other agricultural sectors, the nursery industry has not received nor desired any federal subsidies or price supports. It is striking to realize that despite producing nearly 11 percent of all U.S. farm crop cash receipts, only 0.02 percent of all federal agricultural research dollars has been dedicated to nursery and greenhouse crop production.

AGRICULTURAL RESEARCH SERVICE (ARS)

The nursery and greenhouse industry conducts, and will continue to support, extensive applied research efforts funded by the nursery industry itself via organizations, such as the Horticultural Research Institute (AAN's research division), which annually award hundreds of thousands of dollars in competitive research grants. However, this applied research depends heavily upon the core research programs and methodology applications developed by the Agricultural Research Service (ARS).

The nursery industry needs ARS to continue its basic research activity, especially in such areas as resource and pest management, biological controls, and germplasm. Given the budgetary constraints under which Congress and USDA are operating, it is even more crucial for Congress to invest FY97 funds in good science and technology research programs conducted by ARS, with emphases in environmental quality, rural development, and international competitiveness.

Given the strong economic contributions and the many positive environmental benefits of the nursery and floriculture industry, **AAN urges Congress to work with and direct ARS to undertake new research initiatives in support of the nursery and greenhouse industry's needs.** AAN and the Society of American Florists (SAF), the national trade association representing the floriculture part of our industry, are joining together to seek increased research funding. AAN supports and endorses the testimony which SAF presented before this Committee earlier this week. AAN also supports the research needs identified in the National Florist and Nursery Crops Review which ARS conducted in 1993. **AAN requests Congress to direct ARS to consider the Review's findings in establishing funding needs.**

Given USDA's recent reorganization, and the recognition that Congress is wrestling with intense budgetary pressures and constraints, it is now appropriate for a thorough reassessment of federal agricultural research priorities. AAN strongly believes that federal research dollars should: (1) be leveraged to benefit as broad a spectrum of agriculture as possible; (2) begin to be redirected to agricultural segments demonstrating strong and potential growth rates and whose production practices and products have positive and beneficial impacts on the nation's environment; and, (3) achieve the greatest net return on the federal government's investment.

Methyl Bromide

As a widely used fumigant, methyl bromide is a critical input to many nursery crop management and quarantine systems. However, the U.S. Environmental Protection Agency has listed methyl bromide as a Class I ozone-depleting substance under the Clean Air Act and will ban its use by January 1, 2001. Research and development of effective methyl bromide alternatives for soil fumigation and quarantine treatments are absolutely critical to the nursery industry.

AAN urges Congress to support the Administration's proposed FY97 increase of $1 million to the $14.5 million base for research into methyl bromide alternatives. AAN also urges Congress to

direct USDA to work with user groups, particularly the Crop Protection Coalition, of which AAN is a member, to assure that the funding is used in the highest possible priority areas.

U.S. National Arboretum

When it was founded in 1927, Congress had the foresight to designate research and education as the mission of the U. S. National Arboretum. The nursery industry has immense respect for this highly successful federal institution and for the Friends of the National Arboretum (FONA), which is the non-profit, private sector organization whose mission is to garner additional resources to advance the quality and scope of the National Arboretum's activities. AAN supports and endorses the testimony which FONA presented before this Committee earlier today.

Since its founding, the National Arboretum has introduced over 200 important new cultivars, including azaleas, New Guinea impatiens, crape myrtles, hollies, magnolias, and disease resistant elms. To complement these ongoing invaluable research activities, an educational program is vital to modernize the National Arboretum's programs offered to its rapidly increasing number of visitors and tourists. AAN deeply appreciates that in FY96 Congress directed that not less than an additional $200,000 be available for an interpretative specialist and to adapt existing collections to modern interpretive use. **AAN is not requesting funds in FY97 above that which Congress provided in FY96, but AAN is urging Congress to build that $200,000 into the Arboretum's base so this program can be continued.**

AAN also appreciates that in FY96 Congress directed that not less than an additional $150,000 be made available for expansion of the horticultural and research internship program. An initial thrust of this education initiative should be the development of a National Horticultural Electronic Information System to make the large plant records database at the National Arboretum available to the educational community and the general public available through the Internet. **AAN is again not requesting funds in FY97 above that which Congress provided in FY96, but AAN is urging Congress to build that $150,000 into the Arboretum's base so that this project can be continued.**

Northwest Nursery Crops Research Center (OR WA, ID)

Nursery growers in the Pacific Northwest play a pivotal role in supplying nursery stock, not only to the retail and landscape segments of our industry, but to growers in other areas of the nation. In fact, as much as 90 percent of all nursery crops produced in the Northwest are shipped out of the region to other states and Canada.

The Northwest Nursery Crops Research Center is supported by the American, Oregon, Washington, and Idaho nursery associations, Oregon State University, Washington State University, the University of Idaho, and their related extension services. The funds that Congress has previously provided have established research personnel and environmental program support at the pre-existing ARS Horticultural Lab in Corvallis, Oregon. This center's environmental research stands to benefit the nursery industry and its consumers nationwide.

To address all of the pressing environmental research issues with which nursery growers in the Northwest must contend, **AAN urges Congress to provide $300,000 in FY97 to strengthen the industry's integral research program now underway at the Northwest Nursery Crops Research Center.**

Nursery Crops Research Station (Tennessee State University)

AAN appreciates prior CSRS funding for the establishment and construction of the Nursery Crops Research Station at Tennessee State University. Nursery growers in the South are facing a continuing series of serious plant pest problems. Anthracnose has reduced sales of dogwoods which are a major Southern landscape plant. Japanese beetles have invaded many of the South's major production areas causing serious plant damage and creating quarantine problems. Imported fire ants and gypsy moths are threatening production areas that are presently free of such pests. This is all occurring at the same time that the menu of available minor use crop protection tools is diminishing.

ARS recently established research positions at the new Nursery Crops Research Station at Tennessee State University. **AAN urges Congress to provide $400,000 in FY97 for additional scientist positions to conduct the critical research to address these pest management issues.**

ANIMAL & PLANT HEALTH INSPECTION SERVICE (APHIS)

International and interstate trade in nursery crops is governed by inspection and quarantine regulations designed to prevent or slow the artificial spread of hazardous agricultural pests. APHIS works in cooperation with state departments of agriculture to promulgate and enforce such regulations. **AAN strongly supports APHIS' request for adequate program funds for safeguarding plant resources from exotic pests and diseases.** The continued growth and success of the nursery industry, and all of American agriculture, depend on these vital APHIS programs.

Agricultural Quarantine Inspection (AQI)

Port-of-arrival inspections and first-class mail inspection under the AQI program are the first line of defense against damaging pest introductions. About 80% of the roughly $150 million requested for this program in FY97 is user-fee generated

APHIS does not currently collect user fees associated with commerce and travel from Canada to the U.S. Given the risks demonstrated in recent years of movement of such pests as exotic fruit flies into the U.S. from Canada, APHIS should consider whether collection of user fees on goods moving from Canada would allow for enhanced pest exclusion efforts along the U.S./Canada border.

Plant Pest Survey/Plant Pest Management

AAN supports APHIS' request for $18.835 million for plant pest survey, and $6.275 million for plant pest management programs in FY97. These programs provide funding for survey and management for a wide range of pests, including imported fire ant and gypsy moth. However, AAN notes that APHIS plans to discontinue funding for the imported fire ant quarantine. The FY96 funding level of $1 million represented only 27% of the funding level three years ago, yet the workload associated with the quarantine has increased as the pest has continued to spread.

The small federal funding share is used to carry out cooperative efforts with infested states in the South and Southeast Continued federal involvement strengthens the level of protection of uninfested states, and ensures a fair, consistent framework for domestic commerce. **AAN urges Congress to direct APHIS to maintain imported fire ant funding at the FY96 funding level of $1 million.**

Chrysanthemum White Rust

Chrysanthemums are an important nursery and greenhouse crop. Chrysanthemum white rust, a serious disease of chrysanthemums not known to be established in the U.S., was discovered in 1995 in California, Oregon and Washington In FY95, APHIS spent $140,000 from its *miscellaneous plant diseases* line-item for survey, control and regulatory activities with the states.

AAN urges Congress to direct that APHIS cooperatively fund and conduct with the states a thorough survey and eradication program for chrysanthemum white rust in FY97. In the absence of a strong Congressional and APHIS commitment in FY97, this devastating disease could become firmly established in the U.S., resulting in loss of valuable export markets and increased pesticide use.

Plant Pest Emergency Fund

In recent years, emergencies have been declared as a result of discovery of such devastating pests as Karnal bunt of wheat, Asian gypsy moth, and Mediterranean fruit fly. The costs of emergency programs to eradicate such pests are typically outweighed by the benefits of successful eradication efforts. However, such efforts require rapid response, and adequate resources.

AAN supports the establishment of a "no-year" emergency agricultural pest fund that could be accessed at the sole discretion of the Secretary of Agriculture in the event of pest emergencies. Such a fund should be adequate to deal with multiple emergencies, and should be replenished as needed.

COOPERATIVE STATE RESEARCH, EDUCATION & EXTENSION SERVICE

Pesticide Clearance

The IR-4 program has achieved unparalleled success in facilitating the registration of minor-use pesticides, including biopesticides. While most IR-4 projects focus on minor-use food crops, the program to date has generated data supporting over 3,600 nursery and greenhouse registrations. It should be noted that AAN's research division, the Horticultural Research Institute, is funding the upcoming IR-4 symposium which will bring together leading pest management scientists from around the nation to share research information and establish IR-4 priorities for 1997 and beyond.

AAN strongly supports the Administration's FY97 budget proposal of $10.711 million, for the IR-4 program under the USDA-CSREES Special Research Grants Program. Together with USDA-ARS and Hatch funding, this would increase IR-4 funding to $13.3 million for FY97.

NATIONAL AGRICULTURAL STATISTICS SERVICE (NASS)

In its FY97 budget, the Administration proposes to transfer the authority for conducting the Census of Agriculture from the Department of Commerce to USDA. AAN strongly supports this proposed transfer which would ensure the continuity of both the Census of Agriculture and the follow-on Horticultural Specialties Survey. AAN also believes that these two projects will receive a higher priority at USDA. The nursery industry statistics provided by these projects are not available from any other source, nor could they be objectively and successfully generated by anyone other than the federal government.

AAN urges Congress to approve the proposed transfer of authority for conducting the Census of Agriculture to USDA and to provide the necessary funding to NASS to assure the continuity of the Census of Agriculture. AAN also urges Congress to direct funding to NASS to assure that the Horticultural Specialties Survey will be conducted and completed.

ECONOMIC RESEARCH SERVICE (ERS)

The nursery industry relies heavily upon the agricultural economic analyses produced by the Economic Research Service (ERS). In fact, ERS is this nation's sole source of such comprehensive nursery industry analyses. The availability of these economic analyses of statistical data generated by the Census of Agriculture, Horticultural Specialties Survey, and other sources, continues to be strikingly deficient for the nation's sixth largest agricultural commodity group.

AAN deeply appreciates that the House Appropriations Subcommittee on Agriculture included the following language in its FY96 report: "This Committee encourages the continued support of economic analyses of the nursery and greenhouse industry." Despite this Congressional direction, AAN is gravely concerned that ERS is apparently choosing to ignore both the Congressional support and the nursery industry's demonstrated need for a continuation of these economic analyses. **AAN urges Congress to redirect or earmark $240,000 in USDA's FY97 funds and direct ERS to continue conducting its on-going economic analyses of the size and scope of the nursery and greenhouse industry.**

CONCLUSION

Mr Chairman, as in past years, AAN genuinely appreciates this opportunity to present the nursery industry's views regarding USDA's agricultural research programs and the Department's annual proposed budget. Thank you for your consideration, and we look forward to continuing to work with you and your staff.

PREPARED STATEMENT OF THE AMERICAN ASSOCIATION OF RETIRED PERSONS

The American Association of Retired Persons (AARP) appreciates this opportunity to comment on appropriations next year for various programs which benefit the low income elderly in rural America. We also want to express our appreciation for your efforts to preserve funding for the Section 504 Very Low Income Home Repair Program. These resources are used to remove safety and health hazards for the elderly poor, or to install basic necessities such as indoor plumbing. Your continued support of this program will make a real difference in the quality of life for many elderly Americans.

AARP's recommendations may be summarized as follows:

- Provide at least the current level of funding for section 504 Very Low Income Home Repair Grants and Loans;
- Provide at least the current level of funding for Section 515 Rural Housing Loans with special emphasis on congregate facilities for the frail elderly; and
- Provide sufficient resources for Food Stamp outreach activities.

POVERTY AMONG RURAL OLDER PEOPLE

Some of the nation's most persistent economic, housing, and health problems are concentrated in rural areas among older people. In 1993, older people living in nonmetropolitan areas had a poverty rate of 16.1%, compared with 8.7% for those living in the suburbs and 15.5% for those living in central cities. Poverty increases with age, reaching rates of 19% for rural elderly ages 75 to 79, 24% for those ages 80 to 84, and over 27% for rural older persons 85 and above.

Economic problems are particularly severe among older minorities and among rural women living alone. When these factors are combined, poverty is nearly universal. According to the 1993 American Housing Survey, 36% of all nonmetropolitan households consisted of older women living alone. Especially hard hit are older minorities living in areas where poverty is highly concentrated. Among rural African Americans age 65 and older, the poverty rate in 1993 was approximately 40%. In the southern U.S., where the nine states with the highest rates of poverty are located, the 1990 Census reports that poverty rates for the elderly ranged from 23 to 34%.

Poor older persons are also more likely than higher income elderly to have difficulty caring for themselves because of physical disabilities. According to the 1990 Census, 19.6% of all rural elderly had mobility or self-care limitations. Among rural elderly with incomes below the poverty level, such restrictions in activity have a direct impact on the ability to maintain and repair a home.

In addition to problems associated with low incomes, older persons in rural areas have much less access to needed services. The lack of support has driven many older people to give up their homes and relocate to areas and facilities where services are available.

The Association urges special attention to the plight of older migrant and seasonal farmworkers. Working and living conditions, which are generally bad for farmworkers of all ages, are abysmal for older farmworkers. Earnings for farmworkers over age 65 who are engaged only in farmwork continue to be far below the poverty threshold, and many receive no Social Security or other benefits. Not surprisingly, farmworkers often experience problems characteristic of the elderly before reaching their fiftieth birthday. Disability levels are high -- 44.5% of farmworker families include a disabled member according to one federal study. Unfortunately, access to needed services has often been blocked by prejudice, language barriers, and a lack of outreach activities.

RURAL HOUSING

One result of high rates of rural impoverishment is a striking concentration of housing problems among rural older people. Data from the 1993 American Housing Survey indicate that 34% of older people living in moderately or severely inadequate housing reside in rural areas, though only 28% of all older households live in rural areas.

For Section 515 Rural Rental Housing Loans, AARP strongly urges the Subcommittee to provide no less than the $150 million made available in the current fiscal year. This is the only federal program to target funds directly to rural areas for rental housing production. We recommend that stronger priority be given to serving previously underserved areas and populations such as older farmworkers. Elderly rural renters are cost-burdened to a greater extent than their younger counterparts. The 1990 Census indicates that more than half of elderly rural renters spent more than 30% of their income on housing compared to a third of younger rural renters. Section 515 Rural Housing Loans are critical to providing affordable rental housing opportunities in rural areas. Half of these loans have historically gone to provide housing for the elderly poor and disabled tenants of all ages. The supply of such housing has declined over the past two decades. Applications for Section 515 loans substantially exceed existing loan levels.

The Association further recommends that congregate facilities be encouraged both in new projects and through retrofitting of existing projects. Because of the scarcity of social services in many rural communities, congregate housing programs that provide nonmedical services such as meals, housekeeping, and transportation can be especially crucial to the independence of frail older residents. A study conducted earlier by the Farmers Home Administration has identified the lack of services and management personnel as obstacles to expanding the congregate housing program.

We urge that the Secretary be encouraged to utilize existing programs to provide nonmedical support services in congregate projects both for residents and older persons in the surrounding community. These programs include those administered by the Rural Housing Service such as community facilities, nutrition, homemaker, transportation, and other programs.

AARP further urges greater attention to programs providing affordable housing to remote rural areas and areas with large concentrations of underserved populations such as older and disabled farmworkers. We support the set-aside of funds for underserved rural areas as included in the National Affordable Housing Act. In addition, the Association supports funding for the program for migrant workers and rural homeless people. Migrant workers tend to be older than other farmworkers and are more likely to be minorities with extremely low incomes.

At a minimum, the Association recommends $24.9 million next year for Section 504 Very Low Income Home Repair Grants and $35 million for the loan component. The number of grants awarded in 1995 was about the same as the previous year. Despite this, the Farmers Home Administration reports a backlog of over 11,000 applications on file at the end of FY 1995.

FOOD STAMP OUTREACH ACTIVITIES

Many older people in rural areas also suffer from nutrition-related health problems because they are economically unable to maintain a good diet. All too often, these individuals are forced to limit food purchases in order to manage the increasing costs of other necessities such as medical care, housing, and energy.

Food Stamp benefits can be a lifeline for such families but participation rates remain low due to a lack of information about the program or distance from Food Stamp offices. The social and physical isolation of rural older people makes outreach activities difficult but all the more critical in rural areas.

Food Stamp Outreach can make a big difference in linking eligible low-income older people with needed benefits. This was demonstrated six years ago in a pilot program initiated by AARP. As a result of stationing eligibility workers at one senior center in Memphis, Tennessee, 113 new applications were filed. A three-hour "phone-a-thon" in Cleveland, Ohio produced inquiries from 400 people, the majority of whom were referred to the local Food Stamp office. Bilingual/bicultural workers and materials were successfully used to reach rural, older Hispanic families in Las Cruces, New Mexico. The evaluation of AARP's rural outreach project revealed important information about the complexities of outreach in rural settings, particularly in the area of information dissemination, target populations, relative poverty differences, the impact of various outreach techniques, and availability of volunteers. AARP urges the Subcommittee to provide sufficient funds for outreach activities next year.

Thank you again for the opportunity to present our views on rural housing and food stamps. We look forward to working with the Subcommittee to improve the lives of rural Americans of all ages.

PREPARED STATEMENT OF THE AMERICAN FARM BUREAU FEDERATION

Passage of the 1996 farm bill marks the beginning of a new era for United States agriculture. America's farmers and ranchers will rely more on markets for their livelihood as they shift from traditional farm programs to market transition programs.

How government spends its resources during this new era is extremely important. Research programs that keep our products competitive at home and abroad and conservation programs that enhance our ability to produce food and fiber today and tomorrow should be prioritized. Also key are marketing and regulatory programs that ensure our customers that U.S. produced food is of the highest quality and export market development programs that help to develop new markets around the globe.

Farm Bureau has **been a supporter of a balanced federal budget through reduced spending for many years. We recognize that the budget situation requires the establishment of priorities and ask that you consider our comments as you make decisions concerning FY 1997 agricultural appropriations.**

AGRICULTURAL RESEARCH

Farm Bureau places a high priority on funding for research. The National Research Initiative, the Fund for Rural America research component and the Interregional Research Project # 4 (IR-4) are priority areas for funding. We believe that major agriculture research should be conducted at land grant institutions.

The Federal Agricultural Improvement and Reform Act of 1996 (FAIR), establishes the National Agricultural Research, Extension, Education, and Economics Advisory Board. We support its implementation and use in prioritizing agricultural research needs.

Farm Bureau supports the national effort of IR-4 to clear the registration of safe chemical and biological pest control agents for use on minor crops. This effort has added significance as the Environmental Protection Agency (EPA) moves to cancel needed pesticides because of their failure to meet the outdated zero tolerance set by the Delany Clause. We strongly support the $5 million increase requested for the Cooperative State Research, Education and Extension Services (CSREES) Special Research Grant line for Pesticide Clearance for the heavily backlogged IR-4 program. We further encourage research to find viable alternatives for methyl bromide.

As producers move toward greater reliance on market forces, it is critical that they have ongoing research results available to them to address current and emerging production and marketing problems. The "Fund for Rural America" authorized by the 1996 farm bill includes a research component that will assist farmers and ranchers in meeting these challenges. We support this effort, but caution that this should not cause a reduction in funding for existing programs.

Farm Bureau believes that major agricultural research should be conducted at land grant institutions. These universities have established bases of knowledge and are best suited to conduct agricultural research projects. We support the National Research Initiative as a competitive, peer reviewed system for allocating scarce research dollars to priority research needs.

Farm Bureau is concerned over the continued disparity in funding between plant and animal system research. More than twice as much money is being spent by the Agricultural Research Service in FY 1996 for plant science ($241 million) as for animal science ($112 million). The current administration proposal actually increases this difference. Animal system research should be given as high a priority as plant system research.

CONSERVATION PROGRAMS

Farm Bureau places priority on funding for conservation, especially for cost share assistance and technical assistance programs such as EQUIP, the Grazing Lands Conservation Initiative and the Forestry Incentive Program (FIP). We oppose funding for permanent conservation easements.

Conservation funding is an integral component of the nation's overriding food and natural resource policy. Funding for conservation initiatives should enable farmers and ranchers to balance agricultural production and profitability with conservation and improvement of the nation's natural resources.

Farmers and ranchers respond to positive incentives that enable them to: improve soil, water and air quality; reduce erosion; provide additional wildlife habitat; and increase green space. There is a proven track record of success. Even though farmers and ranchers can lower their production costs with improved conservation, projects can also be very costly to implement. Priority should be given to initiatives that provide education, technical assistance, training and financial assistance to accomplish the nation's farm and resource policy objectives.

Conservation incentives like EQUIP, enable farmers and ranchers to incorporate conservation practices on their farms increase efficiency in addition to conserving and improving natural resources. EQUIP provides the incentives necessary to achieve a broad range of conservation policy objectives. It also gives farmers and ranchers the needed flexibility to tailor their practices to meet their specific needs, thereby providing the means and incentives for local solutions to local problems.

In addition to EQUIP, programs like the Grazing Lands Conservation Initiative and the Forestry Incentive Program (FIP) allow farmers and ranchers to accomplish further conservation and environmental gains without compromising net farm income. FIP does so by encouraging the planting and management of trees on non-industrial private forest lands. The Grazing Lands Conservation Initiative does so through technical assistance.

Farm Bureau has long been a proponent of private property rights and opposes the use of permanent easements. We view permanent easements as a permanent sale of property rights and oppose a permanent shift of power over land from property owners to the federal government. Farm Bureau does not support funding for permanent easements under the WRP or for flood easements.

We do not support funding for the Conservation Foundation.

EXPORT PROMOTION

Farm Bureau places a priority on foreign market development programs, especially the Market Access Program (MAP), Export Enhancement Program (EEP), Dairy Export Enhancement Program (DEIP), the Foreign Market Development Program and USDA's Foreign Agricultural Service (FAS).

As American farmers and ranchers move away from support programs to increased reliance on markets for income they must have the necessary tools to compete in international trade. MAP, EEP, DEIP, the Foreign Market Development Program and FAS are essential if American agriculture is to gain access to world markets, capitalize on potential new market opportunities, and to meet the challenge of a global marketplace still characterized by subsidized foreign competition. They are also critically important to help maintain and strengthen farm income, promote economic growth, improve our balance of trade and provide continued employment for the more than one million Americans whose jobs depend on U.S. agriculture exports.

Farm Bureau supports full funding for the Market Access Program (MAP) at the $90 million level, and funding the Dairy Export Incentive Program (DEIP) to the maximum amount consistent with obligations to the WTO. Export Enhancement Program should be fully funded at the $250 million authorized for FY 97. We believe that exporters of all commodities should be eligible for market promotion funds and that the program should not be limited to small volume exporters.

ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS)

Farm Bureau places a priority on APHIS funding for programs to prevent the introduction of foreign or exotic diseases and pests, to administer control and eradication programs and for the Animal Damage Control (ADC) program.

American agriculture relies on international markets for over one-fourth of production sales. Trade agreements that govern international trade protect domestic and foreign agricultural industries by restricting trade of commodities infected with disease when justified by sound science.

APHIS, in meeting its mandates to ensure the safety of agricultural imports and exports, is facing greater demands as seen in the recent Karnal bunt disease in wheat, poultry exports stopped to Russia and the BSE disease in Great Britain. To meet these challenges, APHIS must have state-of-the-art diagnostic and processing procedures. Farm Bureau supports the proposed $590,000 increase in APHIS's Import/Export Program so that it can deal effectively with the rapidly growing volume and complexity of domestic and international sanitary and phytosanitary issues. This would assure that export decisions are technologically sound, consistent, transparent and documentable.

In addition, Farm Bureau supports APHIS's request for a $639,999 increase to provide leadership, management and coordination of international activities relating to sanitary and phytosanitary measures. This is important to the long-term leadership of American agriculture in international trade. The dispute with the European Union over beef hormone use, the poultry dispute with Russia, and the export of Round-up ready soybeans are several current examples where sound science is critical to lowering barriers and regulations for expanded trade.

Farm Bureau also supports funding to complete brucellosis, tuberculosis, and pseudorabies disease eradication efforts currently underway. After decades of work, the program is on schedule to complete eradication of brucellosis from our cattle herds by 1998. During FY 1996, funding for brucellosis eradication was reduced. Any further reduction will severely impact the ability to complete this job and could negate the millions of dollars that have been spent in this effort. As we move toward eradication of these diseases, it is important that core funding for animal disease control and eradication programs be maintained to assure the ability to minimize the future risk of outbreaks and be prepared to respond to any that occur.

Farm Bureau is concerned that the food scare that has engulfed the European meat industry may surface in the United States. It may become necessary to depopulate cattle that have been imported into this country from Great Britain. We support the allocation of additional funds for increased BSE surveillance of domestic cattle and for compensation to livestock owners whose animals must be destroyed.

Farm Bureau also supports continued funding at $26.6 million for the ADC. (ADC). This program mitigates damage caused by wildlife primarily to agricultural and natural resources as well as to human health and safety. ADC faces particular pressure in dealing with damage caused by wolves, because of the growth in the present population and because of wolf reintroduction programs. Additional research is also needed to develop more biological alternatives for animal damage control.

FOOD SAFETY AND INSPECTION SERVICE

Farm Bureau supports the implementation of a Hazard Analysis Critical Control Point (HAACP) based inspection system.

Farm Bureau supports meat inspection reform that uses the HAACP process to address pathogen reduction.- Funding should be provided to train inspectors, pilot-test HAACP based inspection systems and to provide small plant HAACP demonstration projects. We are concerned about the impact of smaller processors and ask that an unreasonable burden not be placed on these plants.

Farm Bureau encourages agency cooperation with and financial support for voluntary quality assistance programs that can help keep our food supply safe without burdensome regulations. Work needs to be done in this area to develop a cost-effective system that is satisfactory to both industry and government.

The objective of federal and state meat and poultry inspection program is to provide consumers with a supply of wholesome meat and poultry products. This is a service to consumers and costs should be paid from general revenue funds. We oppose user fees to finance federally mandated meat and poultry inspection.

USER FEES UNDER APHIS, GIPSA AND AMS

Farm Bureau is opposed to user fees proposed under APHIS, Grain Inspection Packers and Stockyards Administration (GIPSA) and the Agricultural Marketing Service (AMS).

Farm Bureau is opposed to user fees proposed under APHIS for animal welfare, biotechnology environmental protection and veterinary biologics.

Farm Bureau is opposed to user fees proposed under the GIPSA to recover the cost of standardization activities and license fees to administer the Packers and Stockyards Act.

Farm Bureau is opposed to user fees under the AMS to recover the cost for administering marketing agreements and orders.

NATIONAL AGRICULTURE STATISTICS SERVICE

Farm Bureau supports the transfer of the Census of Agriculture from the Department of Commerce to the Department of Agriculture and recommends USDA funding for the Census.

The Census of Agriculture has been an effective policy tool for monitoring the current status and documenting changes in the agricultural industry and for allocating federal funds. Transfer of the Census of Agriculture to USDA would ensure the continuation of the Census of Agriculture in a manner consistent with the previous Census of Agriculture. The Administration has recommended this move and has requested funding for the Census of Agriculture as part of its FY 97 USDA budget proposal.

In addition, USDA administration of the Census of Agriculture will eliminate some duplication of activities through consolidation. USDA's National Agricultural Statistics Service (NASS) is well equipped to take on this responsibility. Integrating the expertise and resources of the Census of Agriculture into NASS' function will capitalize on organizational strengths and result in a highly efficient operation.

COMMODITIES FUTURES TRADING COMMISSION (CFTC)

Farm Bureau supports CFTC funding and opposes user fees on transactions regulated by the commission.

Commodity futures and options trading are valuable to farmers and ranchers because they provide a means to transfer certain types of risk. In order for the commodity markets to serve this function, the CFTC must maintain the integrity of the exchange as a pricing mechanism. Farm Bureau supports funding for CFTC and opposes merging it with the Securities Exchange Commission. The differences between commodity exchanges and stock markets are significant enough to merit a separate specialized oversight commission. We oppose user fees for transactions regulated by CFTC because such fees could make domestic markets uncompetitive with those in other countries and could cause traders to favor foreign markets.

AMERICAN FEDERATION OF GOVERNMENT EMPLOYEES

PREPARED STATEMENT OF STEVEN M. HOLLIS, PRESIDENT, LOCAL 3354

Mr. Chairman, Senator Bond, and Subcommittee Members, my name is Steve Hollis, and I am President of AFGE Local 3354, which represents employees of both the Rural Development mission area and the Farm Service Agency (FSA) in St. Louis, Missouri, and the Field. I am presenting the views of my Local concerning issues which affect both the programs and the employees of the former Farmers Home Administration (FmHA), which have been transferred to Rural Development (RD) mission area and FSA under the reorganization of the Department of Agriculture (USDA).

In coalition with other federal employee unions, the AFL-CIO, rural housing, family farm, and rural community-based coalitions, AFGE has monitored and testified about the key issues in the FY 1996 Agriculture Appropriations bill and the battle over the Federal Budget. We have worked with both Republican and Democratic Members of the Congress, including the House and Senate Agriculture and Appropriations Committees, and received important support on some issues from both sides of the aisle.

We worked to increase the funding of the Section 502 Single Family Housing Direct Loan program, Farm Operating and Ownership Direct Loans, and the Minority Farmers Outreach program (Section 2501 of the 1990 Farm Bill) over the levels initially passed by the House last year. These direct loan programs reach lower income families and family farmers who cannot be served by the guaranteed loan programs. The Minority Farmer Outreach grants are a very low cost, yet very effective, program under which Native Americans, historically Black colleges, and community-based organizations with a proven track record are funded to do outreach and technical assistance with minority farmers in accessing USDA programs. In those areas where this program has been funded, the loss of Black farm land has actually been slowed down.

The Rural Development title of the new Farm Bill sends a positive signal to rural America that there is still strong bipartisan support for a positive federal role in supporting the infrastructure and development needs of rural communities. The Farm Bill also continued the Agricultural Credit programs of the former Farmers Home Administration, which provide farm ownership, operating, and emergency loans to enable limited resource family farmers to remain, or return, to farming.

My testimony today will focus on several specific ways in which your Subcommittee, in its deliberation and enactment of FY 1997 appropriations for RECD and the FSA, can help ensure we are successful in creating new means to improve delivery of these important programs to your constituencies in rural America, while also minimizing the costs to both the employees and the taxpaying public.

Rural Development Services

A Strategic Plan for RD was drafted in the summer of 1995 following the receipt of input from employees and stakeholders. The heart of the plan is the transition of RD from an organization primarily involved in delivering decentralized financial services to one providing comprehensive rural development assistance.

To achieve its new role, RD staff must become much more active in assisting rural communities and constituencies to identify the solutions to their unique needs and develop strategic plans to meet those needs. We will also help our customers obtain the financial resources they need. These resources may be from RD loan and grant programs or from other sources. When RD funds are being used, staff will seek to leverage them with funds from other sources in order to stretch our limited allocations.

After much debate, the Congress concluded, during the FY 1996 appropriations process, that USDA should continue with implementation of in-house centralized servicing of the Single Family Housing (SFH) program, and that it would be premature to solicit competitive bids. This will save $60-70 million more per year than would contracting out. It will also provide efficiency gains, opening up staff resources within the States to perform these new comprehensive rural development services.

Two important shifts would occur as a result of this projected restructuring of RD Field staff functions. First, the amount of staff resources dedicated to SFH origination is increased from 7% to 9%. This 2% increase represents a 29% increase in the resources dedicated to SFH origination - a 29% increase in customer service. If combined with sufficient budget authority for the SFH direct loan program, these increased efforts in SFH loan making can help overcome the large unmet need for affordable rural housing. In 1994, some 130,000 families applied for Section 502 direct loans, but funding levels allowed less than one-third to receive assistance. Thousands of rural families have literally been able to move out of shacks and into modern homes as a result of this program, which has also provided much-needed economic development and job opportunities in rural communities. I should note that these families who apply for direct Rural Housing loans are not able to acquire credit in the private sector even with the help of a partial Federal guarantee. Therefore, provision of additional guaranteed loan authority does not help them.

The second shift is the FTE opportunities available to enhance RD programs and services. The Agency has identified, for example, the following types of high priority unmet needs to which these staff resources will be shifted: Community Facilities, Empowerment Zone/Enterprise Communities and Champion Communities, Multi-Family Housing Program, Guaranteed 502 Housing, State Business Programs, State Cooperative Development, Technical Assistance to Rural Communities, Environmental Protection Specialists, Government Performance and Results Act,, Rural Development Outreach, Leadership and Coordination of Federal Rural Development Efforts, Civil Rights Coordination, and Native American Liaison functions. If applied to these other RD programs, these 1775 FTE opportunities would increase resources to administer these programs from 45% to 71%, a 54% increase in customer service.

The Administration has included approximately 900 of these 1775 FTE opportunities in its FY 1997 budget request. We urge you to support, or improve on, the Administration's request in this regard. Unless the Congress fully funds the Administration's Salaries & Expenses request for Rural Development, up to 900 additional experienced employees will have to be RIFed causing major damage to USDA's ability to deliver comprehensive rural development services as envisioned by the Farm Bill.

However, the Administration's plan will still result in a RIF of at least 600, and possibly more, front line employees in your rural districts. The Congress can mitigate these layoffs, and loss of experienced employees, by the following measures:

1. Ensure that RD has sufficient funds to mitigate the adverse impact of these changes through retraining employees to perform the new comprehensive rural development assistance functions, funding to pay relocation expenses and incentives for experienced employees and their spouses to relocate from the Field to the Centralized Servicing Center, or, as the last resort, the $36,000 per employee average to support severance pay where RIFs become necessary. Current funding levels don't even allow a proper Reduction In Force. There should be a competitive area adequate for competition based on retention standing, and funds for employees to relocate to obtain their best offer.

2. Support authority for the Under Secretary for Rural Development to offer "buyout" incentives of up to $17.5 million to Rural Development employees to retire, where such retirements would reduce the number of employees who would otherwise be severed through Reduction-in-Force.

3. Provide the funding the Farm Service Agency to maintain a full complement of at least 3600 federal Ag Credit positions, which is still short of that required to properly support these farm loan programs. This staff, and these programs, should not be caught up in the reductions of non-federal staff which are called for by the Farm Bill's elimination of many of the former ASCS programs. If the Farm Service Agency is required to maintain these federal Ag Credit positions in loan making and loan servicing, and if Rural Development employees are allowed to compete for them, many RD employees with prior experience in the Ag Credit programs may be able to continue their service in that Agency.

We will close our testimony regarding RD programs and employees with the following comments and recommendations:

1. The Section 515 rural rental housing program and the associated rental assistance program are truly helping to address the dire need for decent and affordable rental housing in rural communities. RD estimates that a $220 million 515 program level also produces over 4500 jobs, $132 million in wages and $60 million in tax revenues. Funding for this program, including new construction, needs to be increased.

2. Data indicate that about 400,000 rural households lack basic amenities, such as running water. We currently have a backlog of over $2 billion in applications for water and sewer loans. Approximately 90% of these applications are from communities of 3000 or fewer population.

3. USDA reorganization implementation has not even come close to the goals for reducing unnecessary layers of middle management, supervision, and control which were promised by the Department and written into the House Agriculture Committee's report language. RD has only accomplished a 1:9 supervisory ratio, and in Washington, D.C., that ratio is more like 1:4. We urge the Appropriations Committee to enforce the intent of Congress as established by the authorizing committee's report language mandating a 1:14 supervisory ratio.

Farm Service Agency

Here are the specific actions your Subcommittee could take, or influence, which could minimize the damage to family farmers, FSA programs and employees.

Ensure Adequate Funding -- and Protect the Integrity -- of the Farm Credit Direct Ownership and Operating Loan Programs

There is a large unmet need out there for direct farm ownership and operating loans. We have a 3-to-5 year waiting list for direct farm ownership loans in most states. We are running out of direct operating loan funds in March each year. A farmer who is not independently wealthy cannot farm without operating loan credit. Farmers can walk away from the commodity loan and deficiency payment programs. Lack of funding -- or improper administration -- of the Farm Credit program, however, will put them out of business.

We urge you to provide funding for FSA's direct operating loans to no less than $800 million and direct farm ownership laons to at least $100 million. The movement from direct lending to guaranteed lending, and guaranteed lending with interest assistance, has effectively and significantly reduced the available credit for limited resource, minority and beginning farmers who have few other alternative sources. We strongly oppose this redirection of funds and urge that these programs assume their original and important mission with the agency servicing as the lender of last resort for limited resource borrowers.

The Outreach and Assistance Program for Socially Disadvantaged Farmers and Ranchers (7 U.S.C. 2279) provides grants for outreach to socially disadvantaged farmers and ranchers pursuant to section 2501 of the Food, Agriculture, Conservation, and Trade Act of 1990, to assist low income minority farmers and cooperatives to improve viability, diversify operations and build markets. The outreach program is providing minority farmers and ranchers the long-awaited opportunity to more readily access new markets and the many USDA services and programs previously out of their reach. However, the limited funding available denies services to farmers in areas where community-based organizations which have not been funded are ready and able to serve them as soon as resources are made available. Increased services are especially needed to serve producers in the Carolinas and Virginia, where the Land Loss Prevention Project and the Rural Advancement Fund are working. Full funding is urgently needed and long overdue. We recommend full funding of $10 million for FY 1997.

Provide Funding To Maintain At Least 3600 Federal Ag Credit Positions in the Field

The program management standard for excellence in our direct farm loan programs is that each responsible loan officer should never have a case load of more than 56 borrowers. Today, our Ag Credit Team loan officers in many states have an average case load of 150 to 200 borrowers. This makes it impossible to adequately perform the supervised credit functions which are necessary to ensure the success of the program.

The reason for the current situation is that USDA transferred too few employees from FmHA to FSA in the transfer of function which was implemented on October 1, 1995. Analysis conducted by top Farm Credit Program management, with the assistance of the private engineering firm that has been contractually responsible for maintaining the Resource Management System, demonstrates that the transfer left the FSA Ag Credit teams understaffed by over 842 staff years. In lieu of the 3600 staff years transferred (representing 29.6% of the available FmHA staffing), the FSA should, instead, have been allocated 4442 staff years (representing 36.6% of the available FmHA staffing).

Failure to correct this situation will result in direct violations of legislative, regulatory and judicial mandates in the servicing of the Farm Credit accounts. This will, in turn, expose the Government to significant losses (approximately $4.6 billion is at risk according to the General Accounting Office high risk analysis of FmHA published in February 1995).

Instead, in some states, FSA has been filling Ag Credit vacancies with non-federal employees with no background or experience in farm ownership, operating, or emergency loan programs. For example, the Nemaha County Office in Kansas was overstaffed by two, while the Marshall County FSA office was understaffed. Instead of transfering these former ASCS County Committee employees from Nemaha to Marshall, the Marshall office hired a new non-federal employee off the street, with no training, then filled an Ag Credit vacancy with one of the Nemaha County employees, rather than allowing an experienced federal employee to apply for the job. This created a situation where there were two untrained employees during the busiest sign-up period of the year.

2. No FSA Employee Should Be Allowed to Have a Government Farm Credit Loan.

For years, FmHA guarded the financial integrity of the Farm Credit program by ruling that no FmHA employee could receive a farm operating or ownership loan. FSA has abolished this most basic protection against potential conflicts of interest. We strongly urge the Congress to intervene to change this policy.

3. Delegation of Farm Credit Loan Making Authority Should Be Restricted to Federal Employees.

In 1994, AFGE drew Congressional attention to the fact that the Secretary's proposal to "interchangeably utilize and supervise" federal and non-federal employees within the Farm Service Agency field office structure is unprecedented in the federal government. While the negotiations were taking place between the Department, the Office of Personnel Management, and the House Post Office and Civil Service Subcommittee, and the Agriculture Committee on these issues, consensus was reached and commitments were made, that the Farm Credit Federal employee jobs would remain Federal employee jobs after they are transferred to FSA. Budget and staffing cuts would be fair and equitable between the Federal and non-Federal employees, and Federal employee positions would be advertised and back filled as Federal employee positions when current employees left.

Despite this commitment, FSA managers and State Executive Directors are back-filling Ag Credit jobs with employees of the County Committees. They are giving crash courses in Farm Credit, then delegating loan-making authority to non-federal County Office employees without proper training.

If Congress allows this to continue, FSA will be making loans without supervised credit assistance, understanding and compassion; and the Farm Credit program, along with the family farmers who depend on it, will be destroyed. Farm operating and ownership credit is a very different program from corn loans and deficiency payments. An operating or ownership loan requires judgment, knowledge, and background in the farm history, what kind of year it's going to be, is there adequate cash flow and adequate security to protect the Government's interest. Until overturned by litigation, FmHA required loan officers to have an agriculture degree -- and after that, required one-two years of on-the-job training before delegating loan authority. Being a good farm credit loan officer also requires compassion and understanding of limited resource and minority family farmers.

The employees of the County Committees do not have the family farm or financial management background needed to make decisions regarding the Farm Credit program. The County Office employment system is dominated by the local politics of the County Committees, not by financial integrity or compassion for family farmers. Employees of the County Committees are not governed by the Federal Financial Integrity Act, EEO & Civil Rights, or the Merit Systems laws which govern federal employees. This means that employees of the County Committees are fearful of blowing the whistle on improper loan-making practices.

Farm Credit decision-making authority is not being granted to the County Committees. For the same reasons, it should not be granted to the employees of the County Committees. Delegation of loan-making authority should be restricted to properly trained federal employees, and providing funding specifically for at least 3600 federal Ag Credit positions will ensure the right direction for these programs in the future.

PREPARED STATEMENT OF THE AMERICAN FOREST AND PAPER ASSOCIATION

The American Forest & Paper Association (AF&PA) strongly supports the Market Access Program (MAP - formerly known as the Market Promotion Program (MPP)) and Foreign Market Development (FMD) Cooperator program administered by the U.S. Department of Agriculture Foreign Agricultural Service.

AF&PA represents more than 325 member companies and related trade associations (whose membership is in the thousands). Our members grow, harvest, and process wood and wood fiber, manufacture pulp, paper and paperboard products from both virgin and recovered fiber, and produce solid wood products. As a single national association, AF&PA represents a vital national industry which accounts for over 7 percent of total U.S. manufacturing output.

The maintenance and expansion of free, open global markets is a vital concern to the U.S. wood products industry. While domestic markets for our products are expected to grow at a moderate rate in the years ahead, the rate of growth of overseas markets will be substantially higher. Our companies look to these overseas markets to provide the future growth which will enable us to maintain and expand employment. The industry's resource base, productivity and competitiveness gives it the capacity to successfully take advantage of overseas markets, thereby contributing to a favorable balance of trade for the U.S.

The U.S. wood products industry, however, is deeply disturbed by the high tariffs and significant non-tariff barriers which face its products throughout the world. It is estimated that unfair trade practices in combination with other market access barriers against wood use, *cost the U.S. industry an estimated $4 billion annually in unrealized export sales.* Such common practices include high tariffs, tariff escalation, prohibitive business practices such as cartels, exclusive certification requirements and distortion of test results or methods of testing used as the basis for writing building codes, and the drafting of building codes which are specifically designed to discourage the use of foreign species or foreign produced materials.

In an effort to capture some portion of unrealized export markets due to unfair trade practices and other market access barriers, the development of new markets and the maintenance and expansion of existing markets is essential for the U.S. forest products industry. At the same time, few individual companies have the resources to take on the enormous task of developing and expanding new markets for their products. Many opportunities for value-added products would remain entirely unrealized if left solely to private company-driven market development efforts. The U.S. forest products industry supports generic promotion, conducted through non-profit trade associations, on behalf of the entire industry.

For over a decade, the U.S. solid wood products industry has successfully conducted export promotion programs with funding provided by USDA's Foreign Agricultural Service (FAS). USDA's Foreign Market Development (FMD) program, Market Access Program (MAP) provide funding to more than twenty industry associations which generically promote U.S. solid wood products in over 30 countries, and manage nine overseas offices. The programs have successfully changed traditional overseas buying habits, helped overcome foreign trade barriers, and laid the foundation for future export gains in new markets for U.S. wood products in a broad range of end uses. They have united the U.S. wood products industry to work together in a single export program which integrates marketing and trade policy initiatives, a unique achievement.

These programs have helped the industry boost its value-added exports from 46% of total exports in 1985, to 57% in 1995. U.S. solid wood exports have more than doubled from $3 billion to $7.2 billion over the ten year period 1986 - 1995. Employment gains from increased exports have created 148,000 forest industry related jobs: 32,000 direct industry jobs, and another 116,000 indirect jobs (Based on Dept. of Commerce and DRI McGraw Hill statistics); and have generated over $300 million in increased annual Federal tax revenues, more than the cost of the entire MAP. MAP is not a give-away program; the forest products industry contributes significant resources to the successful management of the programs - $5.7 million during the 1994-1995 program year.

MAP and FMD are important components of the industry's export strategy, and have been extremely effective. The programs are a progressive example of industry-government cooperation. AF&PA strongly urges Congress to:

- o Maintain and strengthen funding at or above the proposed $90 million authorized level annually for 1997 - 2002. Programs have been cut since 1990 from $200 million to the proposed level of $90 million annually. The President's FY97 budget would fund MAP at a $110 million level.

- o Maintain critical funding of the FMD Cooperator program at $40 million. FMD also requires a dollar for dollar contribution by industry. FMD provides funding for overseas offices and other basic long term marketing activities. Forward funding levels for the FMD Cooperator program are vital to the existence of U.S. industry presence in developing export markets around the world. The loss of this funding will be the immediate forfeiture of the hard fought U.S. advantage in these markets.

- o Maintain USDA administration of export programs. USDA has successfully administered export promotion programs since the 1950's. Through their agricultural trade offices worldwide, USDA has established long term relationships in overseas markets allowing them to identify market constraints and possibilities. USDA's continued administration of the Market Access Program (MAP) and Foreign Market Development (FMD) Cooperator Program will provide tremendous cost savings.

The forest products industry's programs are completely generic and no company receives direct government assistance; however, small to medium size exporters benefit through generic wood products promotion and education overseas. Specific examples of how these programs have benefitted the U.S. forest product industry are attached. These examples are only a small indication of the positive impact that these programs have throughout the United States. (Company names are available upon request from AF&PA.)

COMPANY STATEMENTS

- ▸ The American hardwood industry recently targeted a lumber distributor located in the U.K. to increase awareness of U.S. hardwoods species, grades and uses. As a result of this distributor's participation in a MAP sponsored trade mission, their sales of American hardwoods rose from only a few percent of the company's overall sales to 15% of their total sales in the following year. Today, American hardwoods account for half of their hardwood business and the company has become one of the two leading distributors of American hardwoods in the U.K.

- ▸ A lumber company, based in the Northeast, employs over 400 individuals, almost 100 of these positions have been filled within the past 18 months during which time the company has become heavily involved in increasing exports. Currently, exports account for over 70% of that company's sales; this figure reflects a 20% increase in overall sales figures. They export on a regular basis to 36 countries and have seen a dramatic increase in sales of lesser known species which they attribute to market education carried out by the American hardwood industry through the MAP & FMD programs.

- ▸ Founded in 1919, an American lumber company had concentrated on selling logs, lumber and hardwood flooring domestically. In the mid-1980's, this company got involved with the generic export promotion programs for hardwoods with the intention of seeking out export customers. That company's export lumber sales increased from 10% in 1984 to 90% of their total lumber production in 1994. They employ nearly 100 people in their Virginia location and act as a secondary employer to more than 1,000 additional workers supplying raw materials.

Recently, a United Kingdom company became interested in marketing U.S. Southern Pine into Turkey and Southeast Asia. This company found a new market niche for Southern Pine in the Philippine mining industry where U.S. Southern Pine has become a replacement for local Benguet Pine.

A small hardwood company has received direct and tangible benefits from their affiliation with the U.S. forest products export programs. As a result the groundwork laid by these programs, this company has been able to make important contacts in Mexico and they ship products there on a regular basis. The additional revenue and profits that are realized through these international trade activities are vital to the firm. The marketing and product materials developed through the program allow small firms to have a first class image around the world.

A small forest products company based in New Hampshire has benefitted from the impact of the forest product generic promotion of lessor known species. These promotions have increased interest in foreign markets for tulipwood and some lower grade material. During the 90-91 period, it was the export market that kept many smaller mills operating. This New Hampshire company's ability to continue buying during those times was a direct result of its export sales (which represent 50% of its dollar volume). In New England many of these smaller mills are multi-generational family businesses. They are the core of our 'living working landscape' in a state like New Hampshire that is 87% forested.

A small family owned sawmill company operating in Mississippi and Louisiana was forced by economic pressures to look for non-traditional market areas to distribute their products. After much exploration, the decision was made to enter the export market. Their first attempt at exporting was made through an export trading company; and was unsuccessful. However, in 1984, they travelled to the Far East on a trade mission which was organized through the U.S. industry export program. As a result of that trade mission and continued involvement with the programs, this company has seen their export sales increase through the years from 0% to 35% of total sales.

A Lynchburg, Virginia forest products company has been very involved with the industry export programs in Korea. As a result of the numerous programs, including seminars, technical assistance, consumer oriented marketing, and the furniture design competition series, sales to Korea have increased over 400% during the past 4 years. What is most impressive about this increase is the type of customer that these shipments are going to - 90% of these shipments going to Korea are for customers that are using the lumber for domestic consumption (i.e., interiors and furniture) as opposed to manufacturing for re-export.

An 89 year old manufacturing firm engaged in the production of hardwood and softwood veneer has plants in Princeton, West Virginia and Gresham, Oregon and sales offices in High Point, North Carolina. They have exported for some 17 years, but have emphasized the export market for only the past six years. During that six year period, export sales as a percentage of production have risen from less than 10% to 60%. This company recognizes that without exports, quite simply, they would not be in business today and because of exports, they employ more people.

AMERICAN HONEY PRODUCERS ASSOCIATION, INC.

PREPARED STATEMENT OF JERRY STROOPE, PRESIDENT

I am submitting this statement in behalf of the American Honey Producers Association, a national organization of commercial beekeepers with activities in most of the States.

The Association is seeking the inclusion of sufficient funds in the appropriation for the Agricultural Research Service of the Department of Agriculture to meet with the critical needs of the honey bee industry. We understand that the Department of Agriculture is seeking an appropriation for fiscal year 1997 of $4.3 million for honey bee research and an additional $1.8 million for research dealing with the Africanized honey bee. We earnestly request your support for this level of funding which is needed to adequately staff ongoing activities.

Honey bees pollinate over 90 cultivated crops whose estimated value exceeds $9.3 billion and produce an average of 227 million pounds of honey annually. Since 1984, the survival of the honey bee has been threatened principally by a number of problems for which beekeepers are depending upon research for the answers. Unfortunately, there is no simple solution to the problems faced by beekeepers. The honey bee industry is too small to support the cost of needed research and there are no funds, facilities, or personnel elsewhere available in the private sector to conduct the needed research. Accordingly, the beekeeping industry is dependent on research from public sources for the scientific answers.

In 1984, a parasitic mite, the tracheal mite, was first found in honey bees in this country. In 1987, a second parasitic mite, the varroa mite, also found its way into our bee population. These two parasitic mites have spread throughout the country and have had a devastating effect on beekeeping in the United States. Currently about 30 percent of honey bee colonies are infested with both the tracheal and varroa mite. As a result, it is not uncommon for beekeepers to report colony losses in excess of 50 percent. Even when colonies survive the impact of the parasitic mites, they are frequently so weakened that many of these colonies are unable to produce surplus honey and are inefficient in their pollination activities.

There are certain chemicals that have been used to assist in controlling the mites – menthol, in the case of the tracheal mite, and fluvalinate, in the case of the varroa mite. While these have helped in reducing the impact of the two mites, they have not provided the definitive answers. The efficacy of menthol depends upon the ambient temperature, and the varroa mite is becoming resistant to fluvalinate. Furthermore, a new ailment has beset the bee industry, the bee parasitic mite syndrome resulting from the interaction of one or more viruses with the varroa mite.

The ideal long range solution for these problems is the development of mite-resistant bee stocks that would require little or no chemicals. This research is ongoing and will take years to complete.

Another threat to the bee industry is the well-publicized Africanized honey bee that first entered the United States in south Texas in 1990 and has since spread to other States. Research is being conducted to develop barrier and control technology, especially for use by queen breeders and public land managers.

Research is also needed to find environmentally safe methods for the control of the greater wax moth which has been destroying millions of dollars worth of beeswax combs. Currently there is no generally acceptable chemical available that the average commercial beekeeper can use to control the wax moth.

Finally, beekeepers are still experiencing colony losses due to pesticides used in the production of crops that are being pollinated by the bees. For example, certain fungicides used in controlling disease in the fruit trees have been lethal to the pollinating bees because of the interaction of the fungicides with the chemicals used to partially control the infestation of mites. Fortunately, the problem is being alleviated as the result of research on the replacement of toxic chemicals with integrated pest management techniques and the use of bio-pesticides.

We appreciate the effort that the Department of Agriculture has been maintaining to meet the challenge. Currently there are four ARS bee laboratories. These are located in Beltsville, Maryland (with a team of 8 scientists); Baton Rouge, Louisiana (with a team of 5 scientists); Tucson, Arizona (with a team of 7 scientists), and at Westlaco, Texas - at a new facility (with a team of 3 scientists). These efforts must be continued and the new facility at Westlaco provided with sufficient staff.

Unless the Departments' research efforts are maintained at an adequate level, honey bee populations will decline and U.S. farmers will begin experiencing lower yields and crops of poorer quality. Additionally, this research is needed to improve the profitability of beekeeping so that the U.S. honey producers can remain competitive on the world honey market. For example, the cost of materials currently registered by EPA to treat a colony of honey bees against the parasitic mites, exclusive of labor is about 10-15 percent of the expected value of the honey yields per colony. In areas where the Africanized honey bees are established, beekeeping costs have risen by 25 percent due to the increased cost of requeening honey bee colonies to maintain desirable bees, safety equipment, and increased labor costs.

We would like to thank you for your support of honeybee research in the past and would appreciate your continued support by approving an appropriation at the level recommended by the Department of Agriculture so that ARS can continue to conduct the research needed to address the variety of problems plaguing the beekeepers in the United States.

PREPARED STATEMENT OF THE AMERICAN INDIAN HIGHER EDUCATION CONSORTIUM

Introduction

Mr. Chairman and Members of the Subcommittee, on behalf of the 29 Tribal Colleges which comprise the American Indian Higher Education Consortium (AIHEC), I thank the Subcommittee for allowing us this opportunity to express our appropriations request and justifications. **For FY 1997, the Tribal Colleges are requesting full funding for their four authorized land-grant programs. These include $4.6 million in an endowment payment, $1.45 million in equity grants, $5 million in extension programs, and $1.7 million in institution capacity building grants.**

This statement will first provide background on the Tribal Colleges' history and mission, then focus on the ways in which the land-grant community's mission has evolved to include the Tribal Colleges, now referred to as the 1994 Institutions. In addition, the testimony will focus on the agricultural potential of American Indian communities and the necessity of ensuring that their residents receive adequate training to capitalize on their resources. The statement will then document the dramatic progress which has been made between the state land-grant institutions and the Tribal Colleges in their joint effort to provide better services to American Indians. Finally, we will conclude with more detailed descriptions of our program requests for FY 1997.

Background

In October of 1994, the 29 Tribal Colleges of the American Indian Higher Education Consortium were authorized in Public Law 103-382 as the 1994 Land-Grant Institutions. "The Equity in Educational Land-Grant Status Act of 1994" authorized programs which will allow Tribal Colleges to more effectively meet the agricultural education needs of American Indians. These vital programs will further allow the 1994 Institutions to provide reservation communities with the same opportunities which have served the rest of the nation's citizens. For Native Americans, this investment is long overdue.

Unlike most land-grant institutions, Tribal Colleges are fairly new institutions. The first Tribal College was established in 1968. Like the state land-grant institutions did in their infancy, Tribal Colleges play a revolutionary role in their communities. The 1994 Institutions' impact has been profound and overwhelmingly positive; the number of American Indians enrolled in higher education, particularly those who live in previously under-educated communities, has been dramatically boosted. At present, AIHEC institutions enroll 25,000 students from well over 200 federally-recognized American Indian tribes. Tribal Colleges have also immeasurably improved the infrastructure of their communities, helping to provide economic growth in a rural setting, strengthening community institutions in fields such as childcare and healthcare, and providing technology from the educational community to traditionally isolated areas.

Despite the fact that they are new, Tribal Colleges have an unparalleled ability to retain, graduate, and place American Indian students in employment and ongoing education. The 1994 Institutions' track record of excellence comes in spite of the fact that they receive little or no state funding and an inadequate level of federal support. Under the mechanism intended to provide operational support for the Tribal Colleges, "The Tribally-Controlled Community Colleges Assistance Act of 1978," they only received an estimated $2,900 per full-time equivalent Indian student in FY 96, less than half the authorized allocation. The average community college receives a far larger amount per full-time equivalent student than the Tribal College Act appropriation provides.

Even with such far superior funding resources, attrition rates for Indian students at mainstream educational institutions remain extremely high. The 1994 Institutions are addressing this challenge for their students. On reservations where opportunity is scarce and unemployment can be as high as 86%, AIHEC's last two studies determined that 74% and 85% of Tribal College graduates are gainfully employed and contributing millions of dollars in federal tax revenue. These working graduates are also providing much-needed educated leadership and creating opportunities for others in their communities.

In addition to their employment success, 42% of Tribal College graduates go on to continue their education, as most Tribal Colleges are two-year institutions. Because of the preparation provided by the Tribal Colleges, these transferring students are far more likely to graduate than are those American Indian students who enter mainstream institutions directly.

By providing economic and educational leadership in their communities, serving as a source of federal and tribal revenue, and bringing the American Indian perspective to the mainstream educational community, Tribal Colleges are playing a vital role in reinvigorating Indian Country and bringing Native America closer to self-determination and self-sufficiency.

The Land-Grant Mission: Inclusion and Opportunity

The legislation which conferred land-grant status upon the 1994 Institutions represented the culmination of nearly a century and a half of extending agricultural and educational opportunity to all Americans. Congress' providing full funding for the 1994 Institutions' separately authorized programs will make this opportunity real for American Indians.

In 1862, the first Morrill Act founded the state land-grant institutions to spur the economic and agricultural development of our nation. Since that time, billions of federal, state, and local dollars have been invested in agricultural education. Congress has also had the wisdom to include all sectors of society into the land-grant community.

In 1890, Congress created special land-grant institutions for African-Americans, due to the fact that their educational needs were inadequately addressed by existing colleges. These institutions have produced outstanding graduates for over a century, and they play a crucial role in the economic development of their regions and the country as a whole.

Each new state to enter the Union has been granted a land-grant college by Congress. Beginning in 1968 and into the next decade, land-grant colleges were approved for all U.S. Trust Territories: the District of Columbia, the Virgin Islands, Guam, Micronesia, American Samoa and Northern Marianas. Congress gave incoming colleges both an endowment and access to land-grant programs.

Tribal Colleges represent the last educational institutions in lands under the American flag whose citizens do not have direct access to funded land-grant educational programs. The programs for which the 1994 Land-Grant Institutions are requesting funding are modest in comparison to what Congress has provided to existing land-grant institutions. The 1994 Institutions cannot rely on state funding as other land-grant institutions do. For American Indians, educational opportunity must be a firm federal commitment.

States have historically had no obligation to American Indian reservations since reservations are trust lands under federal jurisdiction. In most land-grant programs, state and local governments provide significant funds which match and surpass the federal government's investment. States have little incentive to provide these programs to American Indian lands, as reservations are not well integrated into the state's economic or tax infrastructure. The shortage of land-grant services available to American Indians on reservations is a well-documented fact. The Bureau of Indian Affairs' 1986 Agriculture-Range Programs Report to Congress recounted that, "changed priorities and decreasing federal assistance in the last decade have resulted in almost total absence of Extension Agents within reservations."

The 1994 Institutions have the knowledge and the ability to address the needs of Indian Country. There exists a firm commitment on the part of both the mainstream land-grant community and the 1994 Institutions to work cooperatively to address the challenges to Indian education. AIHEC is fully confident that, with Congressional support, the Tribal Colleges can develop the potential of Native America and benefit the lives of hundreds of thousands of American Indians.

Agricultural/Economic Development Potential

Agricultural development clearly will be a vital factor in establishing viable, more self-reliant economies in Indian Country. Recent Indian agricultural production was valued at nine times that of all gas and oil income. There are over 54.5 million acres of American Indian trust territory. Of this total, 75% is agricultural land, and 15% is forestry land. At present, due to the lack of training, expertise and capital, millions of acres lie fallow, under-utilized or developed inappropriately. The state of Indian agriculture is one of under-achievement. The Department of Agriculture's National Indian Working Group (NIWG) reported in their final findings that, "Indian use of Indian lands has dropped off significantly in recent years, and idle Indian lands have increased at a rate as high as 40% in one year." (1987 Final Findings and Recommendations of NIWG).

With the unique demographics of Indian Country, this drop-off in agriculture should not be the case. Compared with mainstream America, there is a far higher percentage of American Indians at the age at which they are just beginning to embark on their education and careers. According to the most recent census data, fully 39% of the American Indian population was under the age of 20, compared with only 29% of the nation's population as a whole. If the 1994 Institutions can ensure that there is enough human capital to fully and effectively develop available natural resources, it will be a boon to the economic pulse of both Indian Country and the federal economy.

The Challenge of Training Human Capital

Although there are no Americans more at the heart of rural America than American Indians, Native American achievement in agricultural education has been staggeringly low. This is due to the fact that mainstream educational institutions often do not understand the unique challenges confronting American Indians, nor are they aware of how to take the requisite steps to ensure success with Native American students. The 1994 Institutions are renowned for their ability to do exactly that; the mainstream land-grant community is eager to learn from the Tribal Colleges in order to better serve American Indians.

The figures which demonstrate mainstream post-secondary education's failure of American Indians are stark. This is particularly true in agriculture. In 1993, only one American Indian in the entire nation received a doctorate in the fields of agriculture and natural resources. In 1994, only two, or .16%, of 1,240 doctoral recipients in these fields were American Indians (National Academy of Sciences Doctorate Recipients Figures). Figures for master level degrees are equally tragic: According to the Department of Education, in 1991, only eight (.2%) of 3,295 of agriculture/natural resources masters' degrees were conferred on American Indians. Similarly, American Indians earned only thirteen (.2%) of 4,765 masters' degrees in biological/life sciences.

Although these statistics underscore the scope of the challenge to higher education, the involvement of the 1994 Institutions as equal partners in the educational community is a critical first step on the road to success. If Congress provides full funding for the 1994 Institutions, the Tribal Colleges will have the resources to work with the mainstream institutions to coordinate program implementation. Both the state institutions and the Tribal Colleges have taken dramatic steps to collaborate and take advantage of shared strengths.

The Spirit of Cooperation and Shared Achievement

The Tribal Colleges have entered into a formal partnership with the National Association of State Universities and Land-Grant Colleges (NASULGC) in delivering land-grant services to reservation communities. NASULGC ardently endorses the concept of the Tribal Colleges receiving land-grant status. The 1994 Institutions also received the endorsement of the historically-black land-grant colleges and the individual land-grant colleges in states which contain Tribal Colleges.

The land-grant community has expressed an eagerness to work with Tribal Colleges and to learn exactly why their programs are so effective and efficient. The 1994 Institutions adhere to the same strict accreditation standards and accrediting boards as do mainstream institutions; however, they are different in some crucial manners, and these unique aspects are what enable them to be so effective.

Most 1994 Institutions and 1862 Institutions have had articulation agreements in place for several years as well as a history of successful student transfers. Additionally, within the last few years, Tribal Colleges and state institutions have collaborated on several successful competitive Department of Agriculture higher education programs.

These collaborations form a comprehensive and well-planned system in which both the Tribal Colleges and the state institutions win; for example, in Wisconsin, Lac Courte Oreilles Ojibwa Community College in Hayward submitted a successful USDA Multi-cultural Scholars proposal with the University of Wisconsin-River Falls. This program allows for American Indians in agriculture/natural resources fields to study for two academic years at the 1994 Institution and then transfer to the state college. Ingeniously, this program was complimented by the two colleges' collaboration on a distance-learning project which received funding under USDA's competitive Higher Education Challenge Grant program. American Indian students who will be transferring from Hayward can take academic courses from the River Falls campus, acclimating them to River Falls' instructors and coursework, and ensuring the smoothest possible transition. It is specifically these types of cutting-edge programs which will enable the land-grant community to dramatically improve their retention and completion rates with American Indian students

The spirit of cooperation is quickly gaining momentum. Two years ago, only one Tribal College was involved in a successful collaborative USDA higher education grant. Last year, at least nine applications involved 1994 Institutions' collaboration, and three were successfully funded.

In order to make these promises of collaboration successful, AIHEC is requesting that Congress appropriate the minimal base funding contained in the 1994 Institutions' land-grant authorization. These are the critical programs which will allow the 1994 Institutions to establish and strengthen the foundation of their agriculture/natural resources infrastructure.

Equity in Program Requests

The twenty-nine 1994 Institutions' appropriations request for FY 1997 are extremely modest in comparison to what Congress appropriates annually to each existing land-grant institution. The legislation which authorized the 1994 Institutions into the land-grant community established four distinct programs. AIHEC is most appreciative of Congress' inclusion of two of our programs despite the serious fiscal limitations of FY 1996. These two small programs catalyzed the 1994 Institutions' crucial first steps in initiating and strengthening agriculture/natural resource programs in their communities, and it is important to build on this momentum. AIHEC is respectfully requesting full funding for the 1994 Institutions' four programs in FY 1997.

- **$4.6 million 1994 Land-Grant Institutions Endowment Fund:** This endowment installment remains with the federal Treasury, and only the interest is given to the 1994 Institutions. Just as other land-grant institutions historically received large grants of land or endowments in lieu of land, this sum would assist the 1994 Institutions in establishing and strengthening their instructional programs in the areas of curricula development, faculty preparation, instruction delivery systems, equipment and instrumentation for teaching students, experiential learning, and student recruitment and retention in the food and agricultural sciences. Although this installment was appropriated in FY 1996, the U.S. Department of Agriculture (USDA) has just finalized program guidelines, and the 1994 Institutions have therefore not yet received any money. However, both the Department and AIHEC are confident that this program will allow the 1994 Institutions the maximum flexibility to meet their needs as well as ensure that as much funding as possible reaches the communities for which the appropriation was intended. Eventually, this endowment will provide each 1994 Institution with significant income. However, in FY 96, each Tribal College will receive far less than $10,000 from this program. The Tribal Colleges feel that it is therefore crucial that they articulate the importance of the other three operational programs for which they are authorized.

  It is important to note that this appropriation is not scored as budget authority nor as outlay, as it remains with the Treasury. Again, only the interest is distributed among 29 institutions. While the 1994 Institutions are grateful for this appropriation, it is critical that the other programs also be funded.
- **$1.45 million Tribal Colleges Educational Equity Grants Program:** Closely linked with the endowment fund, this program provides $50,000 per 1994 Institution to assist in the same areas as the endowment payments do.

  Again, although Congress appropriated this funding in FY 1996, no funding has yet reached the 1994 Institutions. Currently, AIHEC is working with USDA on the guidelines for this program. The 1994 Institutions are optimistic that this program will be successful for two reasons: first, there will be no administrative costs, so the impact on the community will be maximized, and second, for institutions with such small operating budgets, the $50,000 payment represents a sum which will allow the Tribal Colleges to make considerable advances.
- **$5 million Extension Programs:** Currently, the impact of state-run extension services on American Indians living on reservations is woefully inadequate. The 1994 Institutions' authorized $5 million competitive program will play a critical role in addressing this problem. The program is administered and coordinated through the 1862 Institutions, and it complements existing extension components perfectly.

  The existing Reservation Extension Agent program needs other programs to augment its impact. Currently, it provides personnel for reservations, but it is not commensurate with the need for extension. In fact, there are only 32 Indian Reservation Extension Agents nationwide to meet the agricultural needs of 314 reservations and trust lands of 54.5 million acres, and last year this program suffered a cut to its already insufficient budget. Funding for the 1994 Institutions' extension authorization would bolster the efforts of extension agents by allowing them access to funds to provide equitable programs to American Indian communities.

  Just as federal, state, and local resources combine to form an effective and non-duplicative extension program for mainstream America, so to do these vital components achieve a comprehensive plan for Native America. As over two-thirds of extension funding comes from state and local sources, and as reservations are trust lands, states have previously had no responsibility to fund American Indian communities. This extension program rectifies this inequity, and does so in a way that gives the 1862 Institutions and extension agents access to the Tribal College infrastructure which has had unmatched success in implementing programs in Indian Country.

  These resources would be used for desperately needed programs such as rural agriculture economic development, 4-H programs, entrepreneurial encouragement, small farm sustainability, agricultural business development, nutrition counseling, adolescent pregnancy counseling and prevention, services for the elderly, and numerous other programs which have already served mainstream America so well through state extension services. This program represents an ideal combination of federal resources and Tribal College and state institution expertise, where the overall impact will be far greater than the sum of the parts. Further, it will serve as a catalyst to develop even more effective collaboration between the Tribal Colleges and the 1862 Institutions.
- **$1.7 million Institutional Capacity Building Grants Program:** This competitive grants program, which requires a non-federal matching component, would provide the 1994 Institutions with the investment necessary to allow them to strengthen and more fully develop their educational infrastructure needs. The 1994 Institutions have far different immediate needs than state land-grant institutions, which have existed for nearly a century and a half. The Tribal Colleges must develop their classroom capacity, upgrade and purchase computers and equipment, and garner the resources necessary to provide American Indian students with the education necessary to fully compete in the modern agricultural world.

Finally, the 1994 Institutions would like to support NASULGC's request for full funding for the Institution Challenge Grants program and the Multicultural Scholars program. These competitive programs allow the Tribal Colleges to participate jointly with four-year agricultural colleges and allow more effective collaboration and innovation within the land-grant community.

Presidential Tribal College Executive Order

In addition, AIHEC is respectfully requesting Report language which would direct the Department of Agriculture to support fully the creation of a Presidential Executive Order on behalf of our institutions. This Order would mandate all federal agencies to become more aware of Tribal Colleges when promulgating their regulations, and it would also strengthen Tribal Colleges' participation in federal programs. We are asking the Department of Agriculture to make a commitment through their existing administrative budget to assist in the creation of an office which would oversee the implementation of the Executive Order. This commitment can be either financial or personnel detail of staff.

A similar Executive Order was first enacted on behalf of Historically Black Colleges and Universities in 1980 and has been renewed by every President since. Both President Bush and President Clinton enacted Executive Orders on behalf of Hispanic Serving Institutions.

In October of 1994, the Senate unanimously passed a Resolution urging the President to enact an Executive Order for the Tribal Colleges.

AIHEC also requests Report language urging the Department of Agriculture to conduct a comprehensive study of the 1994 Institutions' agriculture education needs and capabilities and how they might best interface with USDA programs. This information would greatly assist the Tribal Colleges in implementing a formal Memorandum of Agreement (MOA) with the Secretary of Agriculture. This MOA would ensure more equitable participation in USDA programs and is required under the "Federal Agriculture Improvement and Reform Act of 1996" to be formalized by January 6, 1997.

Conclusion

The 1994 Institutions have clearly demonstrated their efficiency and effectiveness in providing education to American Indians and producing immediate, positive results in their communities. Funding which has been invested in Tribal Colleges is a proven net-sum gain to the federal Treasury as employment, education, and economic development has increased markedly.

The investment of agricultural education makes sound moral and fiscal sense. There are no other communities more in need of land-grant programs than American Indian reservations, and AIHEC looks forward to being an integral partner in bringing equal educational, agricultural and economic opportunities to Native America. We appreciate Congress' long-time support in allowing the Tribal Colleges to serve as leaders in bringing these communities to greater self-sufficiency.

Thank you for the opportunity to express our request to the Subcommittee.

AIHEC FY 97 Agriculture Appropriations Request

Program	Description	FY 96 Senate Request	FY 97 Authorization	FY 96 Appropriation	FY 97 Administration Request	FY 97 AIHEC Request
Native American Institutions' Endowment Fund	*1994 Institutions receive only interest. Not scored as budget authority or outlay.	($4.6 million)*	($4.6 million)*	($4.6 million)*	($4.6 million)*	**($4.6 million)***
Equity Grants	$50,000 per institution to strengthen agriculture/natural resources programs.	$1.45 million	$1.45 million	$1.45 million	$1.45 million	**$1.45 million**
1994 Institutions Capacity Building Grants	Competitive. Non-federal match required.	0	$1.7 million	0	0	**$1.7 million**
1994 Institutions' Extension Programs	Competitive Administered by 1862 state institutions	$2.55 million	$5 million	0	0	**$5 million**

AIHEC Background

The American Indian Higher Education Consortium (AIHEC) is comprised of 29 Tribal Colleges. Most have been in existence for less than twenty years, and together they enroll nearly 25,000 students from well over 200 tribes. These colleges are located in extremely remote areas which are not served by other post-secondary institutions, and they offer educational opportunities to thousands of Americans for whom higher education would otherwise be geographically or culturally inaccessible. All AIHEC institutions offer two-year degrees, and some offer four-year and graduate degrees. They are accredited by the same regional accrediting organizations which oversee mainstream colleges. Despite minimal funding, AIHEC colleges have unmatched success with American Indian students in terms of student retention, matriculation, ongoing education rates, and job placement.

Land-Grant Background

The "Equity in Educational Land-Grant Status Act of 1994" passed in October, 1994. It rectified the unjust situation in which every state and trust territory under the American Flag had a land-grant college, but American Indian reservations did not. Community colleges in Guam, American Samoa, Puerto Rico, Northern Marianas, Micronesia, and the Virgin Islands served their populations as land-grant colleges, and in 1890 African-Americans began to enjoy the services of seventeen land-grant institutions designated for their communities. With the precedents of established land-grant colleges for minorities and all trust territories, it was inequitable to leave Native American lands without the critical services which the land-grant system offers. The "Equity in Educational Land-Grant Status Act of 1994" had strong bi-partisan support as well as the endorsements of the Department of Agriculture, the National Association of State Universities and Land-Grant Colleges, the 1890 historically black land-grant colleges, and the existing land-grant colleges in states with Tribal Colleges.

Authorized Programs

The total funding for the programs authorized for all 29 1994 Institutions (see above chart) combined is approximately the amount which the Department of Agriculture gives to just one state land-grant college each year.

Action Needed:

Support the 1994 Institutions' FY 1997 Agriculture Appropriations Request for equitable levels of land-grant funding.

PREPARED STATEMENT OF THE AMERICAN SHEEP INDUSTRY ASSOCIATION

The American Sheep Industry Association (ASI) is a federation of state member associations representing the 82,000 sheep producers in the United States. The sheep industry views numerous agencies and programs of the U.S. Department of Agriculture as very important to lamb and wool production.

1996 marks the end of the National Wool Act, the safety net for America's sheep farmers and ranchers, which is eliminated with the 1995 wool crop. Since the elimination of the Wool Act: the U.S. sheep breeding herd has dropped 21.6 percent; 16,000 American family farms and ranches have left the sheep business: lamb imports have increased over 50 percent and wool imports 11 percent; four of the nation's lamb packing plants have closed including the only plant in Texas, the only plant in Minnesota and the only producer owned lamb packing plant in California; and the nation's largest wool textile company has filed bankruptcy. The sheep industry priorities include rebuilding and strengthening our infrastructure, maintaining research capabilities and animal health protection efforts, as well as critical predator control activities.

The rapid changes that have occurred in the domestic sheep industry, and continue to take place, puts further emphasis on the importance of adequately funding the U.S. Department of Agriculture programs important to lamb and wool producers.

We appreciate this opportunity to comment on those portions of the USDA FY 1997 budget which are vital to our industry.

NATIONAL SHEEP INDUSTRY IMPROVEMENT CENTER

This revolving fund. as authorized in the Farm Bill, is a rural development initiative to assist and strengthen the U.S. sheep industry which has experienced dramatic losses of infrastructure in the marketing of lamb and wool since 1993.

The Department's goal is to have the National Sheep Industry Improvement Center established by October 1, 1996. The purposes of the Center shall be to: (1) promote strategic development activities and collaborative efforts by private and state entities to maximize the impact of Federal assistance to strengthen and enhance the production and marketing of lamb and wool in the United States; (2) provide assistance to meet the needs of the U.S. sheep industry for infrastructure development, business development, resource development, and market and environmental research; (3) build the capacity of the U.S. sheep industry to design unique responses to the special needs of the lamb and wool industries on both a regional and national basis; and (4) adopt flexible and innovative approaches to solve the long-term needs of the U.S. sheep industry.

Funding for the Center's activities shall be derived from the establishment of a revolving fund. This fund shall be capped at $50 million.

The Center shall be managed by a nine member, non-compensated, Board of Directors consisting of seven voting members and two non-voting members. The Board of Directors may use the moneys in the fund to make grants and loans to eligible entities in accordance with a required annual strategic plan submitted to the Secretary of Agriculture. Eligible entities under this section is any entity that promotes the betterment of the U.S. lamb or wool industry that is a public, private or cooperative organization. In addition, federally recognized Indian tribes, not for profit organizations, as well as public or quasi-public agencies are also eligible for assistance from the Center. The Center shall manage the revolving fund in a manner that will ensure that sufficient funds are available to carry out the purposes of the Center. To the extent that is practicable the Center shall use the moneys to provide a variety of intermediate and long-term loans to serve broad geographic areas and regions of diverse production.

The Board of Directors must submit to the Secretary an annual strategic plan for the delivery of financial assistance. The plan must identify: (1) the goals, methods, and a benchmark for measuring the success of carrying out the plan and how the plan relates to the national and regional goals of the Center; (2) the amount and sources of federal and non-federal funds that are available for carrying out the plan; (3) funding priorities; and (4) selection criteria for funding and the method for distribution of the funds.

There is tremendous interest in the center from the sheep industry across the U.S. The American Sheep Industry Association strongly supports funding at $50 million.

MARKETING AND REGULATORY PROGRAMS

Animal Damage Control

The Animal Damage Control (ADC) program of USDA-APHIS is vital to the economic survival of the sheep industry. Loss of sheep and lambs to predators combined with predator control costs are now the second largest production cost associated with sheep production. Costs associated with predation now exceed our industry's veterinary costs, labor costs and transportation costs.

Our sheep industry strongly supports the funding for operations of ADC for FY 1997 at $27.4 million. The $900,000 increase is necessary to meet the increasing needs of the program and NEPA requirements.

In 1994, the National Agricultural Statistics Service reported that the sheep industry lost 520,600 sheep and lambs to predators! Since 1990, predator losses have increased from nearly five percent of the total U.S. sheep inventory to 7 percent of the inventory. In states such as Idaho, Montana and Wyoming, sheep and lamb losses to predators increased 33.5 percent between 1990 and 1994. The value of these states' sheep losses increased 53.2 percent to over $7.2 million.

Not only are sheep industry losses to predators significantly increasing, but total agriculture and non-agricultural requests for ADC are increasing. Agricultural requests for ADC assistance increased from 52,000 in 1988 to 99,000 in the last report. During this time period, urban requests for ADC assistance increased from 3,635 requests to 84,199. To meet the increasing demand for ADC assistance, an additional $300,000 in funding is needed by ADC.

The ADC program is an important and necessary government service. The purposes of the program are to control wildlife and pest damage to agriculture, other wildlife, aquaculture, forest, range and other natural resources; to protect public health and safety through control of wildlife-borne diseases such as rabies and black plague; and to control wildlife at more than 600 airports. Many sectors of agriculture, wildlife management and public health and safety rely heavily on the ADC program whose services are provided through a partnership between Federal, state and private interests.

To provide these services, the ADC program is required by law to conduct National Environmental Policy Act (NEPA) analysis on private, state and Federal lands. In its effort to bring the ADC program into NEPA compliance on state and private lands, ADC will need an additional $600,000 over last years' level of funding.

Research in animal damage control is also important to the sheep industry. The long-term ability to protect livestock depends on the development of effective control methods to be accomplished through adequately funded research programs. We support funding for research in this area of at least the FY 1996 amount of $9,655.

Animal Plant Health Inspection Service (APHIS)

ASI believes that emergency disease preparedness and response, as well as animal disease monitoring and surveillance, are both high priorities and essential to accomplishing this mission. With this in mind, we urge the subcommittee to propose adequate funding in these areas.

Screw Worms

This program has been the most successful eradication program using a biological control mechanism in our history. By continuing our cooperative efforts in Central American we will help ensure that screw worms in the United States are a thing of the past. We request that the subcommittee recommend continued funding of this program.

Scrapie

Adequate funding of the Voluntary Scrapie Flock Certification Program through USDA-APHIS is of critical importance to the sheep industry, as well as all segments of the livestock industry. ASI appreciates this Subcommittee's efforts in recognizing the seriousness of this devastating disease and the real need for control and eradication. If funded adequately in the early years of this program, Federal funding should decrease over time to approximately 2 percent of the total program cost. Sheep producers are now paying over 50 percent of the total cost. We request that this program be funded in FY 1997 under the "Animal Health Monitoring and Surveillance" line item at no less than the FY 1996 level.

Lamb Market Information and Price Discovery Systems

The sheep industry strongly supports continued appropriations at the FY 1996 levels for USDA-Agricultural Marketing Service and the National Agricultural Statistics Service to proceed with market information and price discovery systems for lamb.

FOREIGN AGRICULTURAL SERVICE (FAS)

The sheep industry participates in FAS programs such as the Market Promotion Program (MPP), GSM-102 and GSM-103 export credits and the Foreign Market Development Program (FMD). ASI strongly supports continued appropriations for these critical Foreign Agricultural Service programs. ASI is the cooperator for American wool and sheep genetics and has achieved remarkable success in increasing exports of domestic wool, breeding sheep and semen. Value of raw wool exports have increased 170 percent over the last five years with the aid of this funding. American lamb sales also benefit from the Foreign Market Development Program through increased international efforts. ASI supports the funding for MPP and FMD at no less than $100 million and $40 million, respectively.

NATURAL RESOURCES CONSERVATION SERVICE (NRCS)

ASI urges increased appropriations for the range programs of the Soil Conservation Service to benefit the private range and pasture lands of the United States with conservation assistance. We support an increased level for the Grazing Lands Conservation Initiative which ASI has worked with, along with other livestock and range management organizations, to address this important effort for rangelands in the U.S.

RESEARCH, EDUCATION AND ECONOMICS

The sheep industry recognizes that it must be globally competitive, profitable and sustainable as a user of and contributor to our natural resource base; that production and processing practices must be environmentally sound, socially acceptable and must contribute to the goals and overall well-being of families and communities. It is therefore essential that an integrated systems approach be used, focusing on problem-oriented programs utilizing interdisciplinary team efforts. These efforts should be applied both to plan and to conduct research on complex problems as well as to apply problem-solving technologies on farms and ranches through quality educational programs.

Linking science and technology to societal benefits was the theme of the "Food Animal Integrated Research for 1995" (FAIR '95) symposium. Research and education priorities were agreed upon there by a cross-section of society from farmers to consumers. We encourage the Subcommittee to review the FAIR '95 report as you make your decision on research and education funding.

Agricultural Research Service

ASI recommends the continued support of the scrapie/BSE research initiatives at Pullman, Washington and Ames, Iowa. The collaborative research that is ongoing at these locations is recognized world wide and will be key in finding solutions to these disease problems.

The Board on Agriculture of the National Research Council, established by the National Academy of Sciences, has provided invaluable service to U.S. animal agriculture through the development and publication of the "Nutrient Requirements of Domestic Animals" series of reports. Since some of these reports are in need of revision and are far out-of-date due to Board on Agriculture budget constraints, we recommend that line-item funding be established to support the development and publication of the "Nutrient Requirements of Domestic Animals" series through the National Research Council, Board on Agriculture Committee on Animal Nutrition.

COOPERATIVE STATE RESEARCH EDUCATION AND EXTENSION SERVICE (CSREES)

We strongly support the National Research Initiative (NRI) and we recommend funding of at least $130 million for FY 1997. The competitive grants awarded under its program are for the highest quality research and they are addressing the goals and objectives of FAIR '95.

Maintenance and enhancement of environmental quality are high priorities of the general public, as well as the livestock industry and the sheep industry in particular. The vast majority of the western public rangelands are arid ecosystems. They are also the primary generator of the region's most precious natural resource--water.

The scientific literature generally indicates that sheep grazing on watershed and riparian areas is not detrimental and, in fact, may be beneficial; however, properly designed long-term studies have not been done. Economical systems of grazing national rangelands are essential to the viability of the sheep industry, since approximately 35 percent of the nation's sheep are grazed on these lands. As the public deliberates on legal issues regarding water quality, multiple use and biodiversity of public rangelands, it is essential that everyone enters these discussions with the best scientific information possible.

ASI requests that $500,000 be appropriated through a CSREES targeted special grant for a six-year study to measure and document the effects of sheep grazing on riparian and watershed areas. We propose that the project be a collaborative effort between CSREES through Montana State University and ARS through the U.S. Sheep Experiment Station at Dubois, Idaho. ASI will pledge $200,000 of producer-funded support and ARS has pledged $300,000 of redirected funds toward the project for a total project cost of $1 million.

The ongoing research in wool is critically important to the sheep industry. ASI supports continued funding of $250,000 for FY 1997 through the special grants program of the CSREES.

Extension Service

One of the most cost effective and efficient new technology delivery systems is the use of computer assisted systems such as "CD-ROM". We believe that an investment of public funds to put agriculture on the "information super highway" will pay off many fold for producers and consumers alike. Easy and quick access to credible information will help keep U.S. food and fiber producers competitive and help assure high quality products for consumers. We request that the Subcommittee recommend funding under CSREES Extension activities to continue and expand computer assisted delivery systems, including CD-ROM data bases, for livestock.

The industry greatly appreciates this opportunity to discuss these programs and appropriations important to the sheep industry. We plan to also submit a supplemental statement from the industry regarding comments to the Department budget.

ASSOCIATION OF RESEARCH DIRECTORS, INC.

PREPARED STATEMENT OF JOHN C. OWENS, DEAN AND CHIEF ADMINISTRATIVE OFFICER, COLLEGE OF AGRICULTURE AND HOME ECONOMICS, NEW MEXICO STATE UNIVERSITY

I want to thank the subcommittee for being gracious enough to afford New Mexico State University your attention today and in the past. We appreciate your concern for the Southwest.

Your subcommittee has appropriated $3.65 million to the University's Center for Sustainable Development of Arid Lands, contingent on matching funds. We have sought a total of $11 million toward this project and sought matching funds plus more from the state of New Mexico.

The New Mexico State Legislature concluded its 30-day session for 1996 on February 15. Coming into the session, the state of New Mexico had appropriated $1.34 million. During this session, the Legislature sent to the Governor authorization to include $9.4 million in general obligation bonds for approval by the electorate in November 1996. The Governor supported the legislation with his signature.

As the educational bond issue on the ballot during the presidential election in 1992 passed, it appears as though there are excellent prospects for total state funding for the project of $10.74 million as we enter 1997. Also, we think the State will continue its commitment to supply funds for furnishings, equipment, and other expenses not subject to federal match.

The need for the Center is as vital as ever. We have noted to the subcommittee in the past that NMSU is a land grant university, is a Carnegie I research institution, and designated as a Hispanic serving institution. These facts make NMSU a unique institution in the service of minority populations and the Southwest region.

We have noted that NMSU, a university that has been accessible to a broad array of students, accounted for 75 percent of all growth in student numbers in New Mexico's six four-year institutions of higher learning between 1975 and 1994. As a result, students attending NMSU have less space per student than at any other four-year institution in the state.

Construction of the Center provides an opportunity to place facilities, particularly teaching laboratories, where students have found the best opportunity for a quality education. The effect will be to place future graduates in the mainstream of the scientific community by conveying competitive skills in contemporary laboratory facilities.

The Center is central to protecting the environment, even while this fragile border region comes under pressure from increasing population and commerce, both domestic and international. Consequently, I submit a request for the remainder of our original $11 million request -- $7.4 million. Thank you once more for entertaining this very important request. We plan to match each and every one of these dollars for building construction.

We continue to be proud of the return on investment in agricultural research of $14 of economic impact for every dollar invested, not counting protection of the environment through our research, which is far more difficult to quantify.

In that vein, NMSU's Agricultural Experiment Station requests federal funds to research means of preventing crop damage due to soilborne diseases in irrigated agriculture. Two complementary goals drive the research: To develop prescriptive irrigation practices accounting for soil types, weather conditions, points in the growing season, and other factors in order to inhibit growth of disease organisms while optimizing crop production; and to develop Phytophthora-tolerant cultivars that will be available to farmers.

Last year, a $127,000 CSREES grant was appropriated for research into preventing devastation by Phytophthora root rot.

Federal funding of $150,000 is requested to continue NMSU's Agricultural Experiment Station research efforts in studying soilborne diseases.

NMSU's Agricultural Experiment Station requests funds to develop alternatives to crop pesticides that can destroy beneficial biological agents and contaminate ground water. Research will focus on transferring genetic information to plants in order to create commercially viable crops with resistance to pests. Last year, $127,000 was appropriated for research at NMSU, focusing on developing nematode resistance in plants through biotechnology. Expanded research will build on the ongoing research utilizing pesticidal proteins such as collagenase, modified *Diphtheria* toxin, *Bacillus thuringiensis* toxin, and protease inhibitors.

A federal appropriation of $150,000 is requested to continue research to develop alternatives to pesticides using biotechnology.

On behalf of a five-institution consortium including the University of Arizona, Texas Tech University, Los Alamos National Laboratory, and the University of California-Riverside, NMSU's Agricultural Experiment Station requests funds to develop innovative plant biotechnology advances in agriculture of arid and semi-arid regions. Objectives include: Evaluation of tolerances in desert plants and arid lands crops; impacts of stresses on plant pests and beneficial organisms; and evaluation of genetic modifications of plants for adaptability to arid regions.

Last year, $338,000 was appropriated for the Southwest Consortium mini-grant program.

Federal funding of $400,000 is requested to continue collaborative research efforts through the Southwest Consortium.

NMSU's Agricultural Experiment Station requests funding to apply genetic engineering technology toward the development of new agricultural crops yielding industrial products, such as high- temperature lubricants, non-polluting epoxies, and industrial nylons.

Research focuses on using recombinant DNA technology to allow desert plant oil production to be expressed in agronomic oilseed crops.

Last year, $169,000 was appropriated to develop technologies for production of renewable industrial oils.

Federal funding of $200,000 is requested to continue research on technologies for production of industrial oils from renewable plant sources.

NMSU's Agricultural Experiment Station requests funding to evaluate the environmental health of arid and semi-arid rangelands with the aid of tools of science previously unavailable to range researchers. The goal is to understand how rangeland ecosystems respond to natural and human-caused stresses in order to manage them more effectively.

Last year, a total of $333,000 in CSREES and ARS funds allowed NMSU scientists to conduct studies leading to considerable new understanding of species of plants that are important indicators of ecosystems that have become compromised, as well as keystone species that dominate rangeland ecosystems. The goal of the research is to develop knowledge needed to establish sustainable conditions through active management.

A federal appropriation of $400,000 is requested to continue studies that consider the environmental health of semi-arid rangelands.

NMSU's Cooperative Extension Service requests funding to expand the efforts of the New Mexico Range Improvement Task Force to include both a broader western regional perspective and greater emphasis on policy analysis in an ecosystem context as both legislation and litigation rapidly evolve and impact western rangelands.

Policy research and impact assessment needs have increased much faster than have capabilities for providing objective scientific evaluations and recommendations.

The most urgent need is to provide expertise in ecosystem management, riparian ecology, and natural resource policy. To ensure uniform and planned implementation of management policies, these scientists, along with the existing RITF team, must provide input and assessment on policies affecting both public and private land users in the West. This expanded RITF focus will assist in good stewardship and long-term health of the West's natural resources, while recognizing the tri-cultural heritage of the region and the importance of management for long-term sustainability.

Last year $197,000 in CSREES funds were appropriated. A federal appropriation of $300,000 is requested to continue the efforts of the New Mexico Range Improvement Task Force.

NMSU's Cooperative Extension Service requests funding to continue the successful Rural Economic Development Through Tourism (REDTT) Project for a fifth year. The project completed its fourth year of operation on March 31,1996. REDTT provides education, training, and technical assistance to nine rural counties in New Mexico.

Last year, $227,000 was appropriated for continuation of the REDTT project, which serves the counties of Chaves, Cibola, DeBaca, Doña Ana, Eddy, Lea, Lincoln, Otero, and Sierra.

A federal appropriation of $230,000 is requested to continue and to expand NMSU's Rural Economic Development Through Tourism (REDTT) Project for a fifth year.

NMSU's Agricultural Experiment Station requests funds to support research at the Jornada Experimental Range in Las Cruces, New Mexico, that addresses sustainable development and remediation of arid and semiarid rangelands. Objectives include developing new methodologies for monitoring and assessing rangeland ecosystems, designing new sustainable technologies for remediation of desertified lands, and cooperating with NMSU's Range Improvement Task Force and Physical Sciences Laboratory, as well as national laboratories, to create technology transfer that has applications for arid rangeland management.

Last year $500,000 of Agricultural Research Service funds were redirected to address these needs.

A federal appropriation of $2.1 million is requested to develop new technologies for monitoring, restoring, and managing rangeland ecosystems for sustainable development of the desert's resources.

These projects, as I have said in the past, are in the tradition of investing in America's capacity to change and develop a vibrant economy while sustaining our resources for future generations. Thank you once again for allowing me the opportunity to offer this report and request.

PREPARED STATEMENT OF THE CALIFORNIA FARM BUREAU FEDERATION

The California Farm Bureau Federation (CFBF) is the largest general farm organization in the state. We have more than 42,000 member farm families and more than 72,000 member families in total. Nationwide our views are reflected by the American Farm Bureau Federation, which represents more than four million members. We appreciate the opportunity to provide a statement in support of the positive changes that are necessary to ensure an adequate and sustainable supply of quality food and fiber.

Passage of the Federal Agricultural Improvement and Reform Act of 1996, the 1996 farm bill, begins a new era for American agriculture policy. Farmers and ranchers will now rely on market forces for their livelihood as the transition from farm programs to free markets begins. Now more than ever, how the government spends its limited resources will become of greater importance to the agriculture industry.

We have long been a supporter of balancing the federal budget through reduced government spending. We recognize that as the federal government is downsized, more emphasis needs to be placed on programs that have multiple benefits. We ask that as the committee determines its priorities for agricultural appropriations for Fiscal Year 1997 (FY97) they give the following programs serious consideration:

AGRICULTURAL RESEARCH

CFBF supports the funding request in President Clinton's FY 97 budget of $22 million for the construction of the much needed 104-acre USDA-Agricultural Research Service's Horticultural and Water Management Research Laboratory to be located in Parlier, California. Upon completion, this laboratory will conduct research dealing with water management, postharvest quality, insect control, and quarantine measure.

The new Parlier facility will replace the existing Fresno facility that was constructed in the 1920s and whose original buildings are no longer adequate. At least half of the scientists are currently housed in trailers for lab and office space. Additionally, the Fresno facility is hampered by urban pressures brought on by residential and commercial encroachment. In fact, three sides of the existing facility border urban development. Further complicating the existing Fresno site is that no room exists for expansion.

Federal funding of overall research should be maintained at its highest feasible level to assure a supply of basic research and to channel those findings in applied research. We place a high priority on supporting the agricultural research conducted by the University of California, including both the Experiment Station and Cooperative Extension, the California State University and colleges and the USDA Agriculture Research Service (ARS). We support continued funding for the work being done by ARS in the area of rice genetic research on stem rot.

While there are many programs deserving of full funding, we specifically support full funding for the Interregional Research Project No. 4 (IR-4). IR-4 responds to minor-use pest control needs by assisting EPA in establishing tolerance for products where there is no economic incentive for the agrichemical industry to do so. We recommend a funding level of $15 million in the USDA Cooperative State Research, Education, and Extension Service (USDA-CSREES) Special Research Grants budget for FY97 to fund the operation of the IR-4 Project.

CFBF supports research efforts to find alternatives to methyl bromide. Methyl bromide, one of the most widely used chemicals in the United States, is scheduled to be phased-out of use in the United States by 2001. Unfortunately, an alternative to this versatile product is not yet available. The loss of methyl bromide will have widespread repercussions on California agriculture's $20 billion industry. The loss of methyl bromide for post-harvest treatment of products exported to countries which require methyl bromide fumigation will devastate California agriculture's $12 billion export market. We were encouraged by Congress' increase in FY'96 funding for USDA ARS methyl bromide research. As the 2001 phase-out deadline approaches, adequate funding for alternative research becomes more important. For that reason, we request that Congress again approve a substantial increase in research money dedicated to methyl bromide alternative research.

EXPORT PROMOTION

We specifically support full funding for the Market Access Program (MAP) at the $90 million level and oppose any participation limits. MAP has been tremendously successful in increasing exports of California's specialty commodities like citrus, raisins, walnuts, almonds, peaches, and wine to foreign markets. MAP funds have opened-up important new markets for California agricultural products, contributing to the state's $12 billion in annual farm exports.

We support full funding for the Dairy Export Incentive Program (DEIP) to the maximum level allowed under the World Trade Organization (WTO).

ANIMAL AND PLANT INSPECTION SERVICE (APHIS)

CFBF places a priority on APHIS funding for programs to prevent the introduction of foreign or exotic diseases and pests, to administer control and eradication programs and for the Animal Damage Control (ADC) program. Funding at $26.6 million for the ADC program should continue. This program mitigates damage caused by wildlife primarily to agricultural and natural resources as well as to human health and safety. ADC faces particular pressure in dealing with damage caused by wolves, because of the growth in the present population and because of wolf reintroduction programs. Additional research is also needed to develop more biological alternatives for animal damage control.

APHIS is facing greater demands in ensuring agriculture safety to imports and exports. The introduction of Karnal bunt, a wheat fungal disease, earlier this year illustrates the need for continued full funding of APHIS. CFBF supports the request from APHIS of a $590,000 increase in funding to the Import/Export Program so that they can deal effectively with rapidly growing problem of international sanitary and phytosanitary issues.

In addition, CFBF supports APHIS' request for a $639,999 increase to provide leadership, management and coordination of international activities relating to sanitary and phytosanitary measures. This is important to the long-term leadership of American agriculture in international trade. The dispute with the European Union over beef hormone use, the poultry dispute with Russia, and the export of Round-up ready soybeans are several current examples where sound science is critical to lowering barriers and regulations for expanded trade.

CFBF also supports funding to complete brucellosis, tuberculosis, and pseudorabies disease eradication efforts currently underway. After decades of work, the program is on schedule to complete eradication of brucellosis from our cattle herds by 1998. During Fiscal Year 1996, funding for brucellosis eradication was reduced. Any further reduction will severely impact the ability to complete this job and could negate the millions of dollars that have been spent in this effort. As we move toward eradication of these diseases, it is important that core funding for animal disease control and eradication programs be maintained to assure the ability to minimize the future risk of outbreaks and be prepared to respond to any that occur.

CFBF is concerned that the food scare that has engulfed the European meat industry may surface in the United States. We support the allocation of additional funds for increased BSE surveillance of domestic cattle and for compensation to livestock owners whose animals must be destroyed.

FOOD SAFETY AND INSPECTION SERVICE

CFBF supports the implementation of a Hazard Analysis Critical Control Point (HAACP) based inspection system.

CFBF supports meat inspection reform that uses the HAACP process to address pathogen reduction. Funding should be provided to train inspectors, pilot-test HAACP based inspection systems and to provide small plant HAACP demonstration projects. We are concerned about the impact of smaller processors and ask that an unreasonable burden not be placed on these plants.

CFBF encourages agency cooperation with and financial support for voluntary quality assistance programs that can help keep our food supply safe without burdensome regulations. Work needs to be done in this area to develop a cost-effective system that is satisfactory to both industry and government. The objective of federal and state meat and poultry inspection program is to provide consumers with a supply of wholesome meat and poultry products. This is a service to consumers and costs should be paid from general revenue funds. We oppose user fees to finance federally mandated meat and poultry inspection.

CONSERVATION PROGRAMS

Conservation funding is an integral component of the nation's overriding food and natural resource policy. Funding for conservation initiatives should enable farmers and ranchers to balance agricultural production and profitability with conservation and improvement of the nation's natural resources.

Farmers and ranchers respond to positive incentives that enable them to: improve soil, water and air quality; reduce erosion; provide additional wildlife habitat; and increase green space. There is a proven track record of success. Even though farmers and ranchers can lower their production costs with improved conservation, projects can also be very costly to implement. Priority should be given to initiatives that provide education, technical assistance, training and financial assistance to accomplish the nation's farm and resource policy objectives.

CFBF places priority on funding for conservation, especially for cost share assistance and technical assistance programs such as EQUIP, the Grazing Lands Conservation Initiative and the Forestry Incentive Program (FIP). We oppose funding for permanent conservation easements.

Conservation incentives such as EQUIP can be especially valuable to California, enabling farmers and ranchers to incorporate conservation practices on their farms increase efficiency in addition to conserving and improving natural resources. EQUIP provides the incentives necessary to achieve a broad range of conservation policy objectives. It also gives farmers and ranchers the needed flexibility to tailor their practices to meet their specific needs, thereby providing the means and incentives for local solutions to local problems. We oppose herd size limits within the EQUIP program.

In addition to EQUIP, programs such as the Grazing Lands Conservation Initiative and Forestry Incentive Program (FIP) allow farmers and ranchers to accomplish further conservation and environmental gains without compromising net farm income. FIP is an important forest management program which encourages the planting and management of trees on non-industrial private forest lands. We support full funding of the FIP program. The Grazing Lands Conservation Initiative operates effectively through technical assistance.

CFBF has long been a proponent of private property rights and opposes the use of permanent easements. We view permanent easements as a permanent sale of property rights and oppose such a shift of power over land from land owners to the federal government. CFBF does not support funding for permanent easements under the Wetland Reserve Program (WRP) or for flood easements.

We do not support funding for the Conservation Foundation, and we also oppose funding for the forestry legacy program.

NATIONAL AGRICULTURE STATISTICS SERVICE

We support the transfer of the Census of Agriculture from the U.S. Department of Commerce to the U.S. Department of Agriculture. We believe that USDA has the required expertise and infrastructure to streamline the program, reducing a duplication of government services.

The reports provided by the USDA Market News Service are important tools for many farmers and ranchers in California. The Market News Service should furnish information on direct sales of slaughter and feeder cattle, sheep, and hogs. Annual production reports should be reinstated for fruits and vegetables and speciality crops. These services should be continued and strengthened to provide producers with information on supply, demand, export demand, pricing and planting intentions in a timely and accurate manner.

Once again, thank you for the opportunity to submit a statement to the subcommittee.

CALIFORNIA INDUSTRY AND GOVERNMENT COALITION ON PM–10

PREPARED STATEMENT OF JAMES D. BOYD, EXECUTIVE OFFICER, CALIFORNIA AIR RESOURCES BOARD, ET AL.

Mr. Chairman and Members of the Subcommittee:

On behalf of the California Industry and Government Coalition on PM-10, we are pleased to submit this statement for the record in support of our fiscal year 1997 funding request of $1.2 million for the California San Joaquin Valley Region PM-10 Air Quality Study. Our request includes $436,500 (one-half of the historical baseline split between California and Washington) from CSREES, a new allotment of $600,000 from CSREES, and $125,000 from the ARS-requested appropriation to be targeted to California.

The San Joaquin Valley of California and surrounding regions exceed both state and federal clean air standards for small particulate matter, designated PM-10. The 1990 federal Clean Air Act Amendments require these areas to attain federal PM-10 standards by December

31, 2001. Attainment of these standards requires effective and equitable distribution of pollution controls that cannot be determined without a major study of this issue.

According to EPA and the California Air Resources Board, existing research data show that air quality caused by the PM-10 problem has the potential to threaten the health of more than 3 million people living in the region, reduce visibility, and impact negatively on the quality of life. Unless the causes, effects and problems associated with PM-10 are better addressed and understood, many industries will suffer due to production and transportation problems, diminishing natural resources, and increasing costs of fighting a problem that begs for a soundly researched solution.

PM-10 problems stem from a variety of industry and other sources, and they are a significant problem in the areas that are characteristic of much of California. Typical PM-10 sources are dust stirred up by vehicles on unpaved roads, and dirt loosened and carried by wind during cultivation of agricultural land. Soil erosion through wind and other agents also leads to aggravation of PM-10 air pollution problems.

The agriculture portion of this study will be developing specific types of information, tools and techniques needed to develop an inventory and the management practices that will most likely be part of the control strategies. They are: 1) validate method or methods for accurately measuring fugitive PM-10 emission rates from an individual site or operation; 2) a method to easily and quickly estimate PM-10 emissions; 3) an accurate inventory of fugitive PM-10 dust sources by individual farming operations; 4) validated (field tested) best management practices; 5) a clear understanding of significant factors that effect PM-10 emissions; and 6) a workable, validated model or models for predicting PM-10 emission, based on operational parameters.

The primary focus of the short term objectives is on those soils, practices, and conditions presumed to have the highest PM-10 emissions. Priority for this work will be focused on the following situations, practices, and crops within the study area.

Almond, Walnut and Fig Harvest

Preparation for harvest
Shaking trees
Windrowing
Picking up nuts
Ambient conditions before and after

Cotton Harvest

Harvesting - 1st and 2nd picking
Shredding of stalks
Stalk incorporation
Ambient conditions before and after

Fall/Spring Land Preparation

Deep tillage
Discing
Land planning
Bed formation
Ambient conditions before and after

Land Leveling

Appropriate practices

Dairy Industry

Dairy Lagoons
Livestock Corrals

Feedlots

Feedlot activities

Grain Harvesting

Harvesting
Stubble incorporation
Discing
Burning

The importance of this study on PM-10 is underscored by the need for more information on how the federal Clean Air Act Amendments standards can be met effectively by the business community, as well as by agencies of federal, state and local government whose activities contribute to the problem, and who are subject to the requirements of Title V of the Clean Air Act. There is a void in our current understanding of the amount and impact each source of PM-10 actually contributes to the overall problem. Without a better understanding and more information -- which this study would provide -- industry and government will be unable to develop an effective attainment plain and control measures.

Agriculture wants to be a part of the effort to solve this major problem, but to do so, we need federal assistance to support research and efforts to deal effectively with what is essentially an unfunded federal mandate.

Agriculture and industry, in concert with the State of California and local government entities, are attempting to do our part, and we come to the appropriations process to request assistance in obtaining a fair federal share of financial support for this important research effort. In 1990, our Coalition joined forces to undertake a study essential to the development of an effective attainment plan and effective control measures for the San Joaquin Valley of California. This unique cooperative partnership involving federal, state and local government, as well as private industry, has raised more than $12 million to date to fund research and planning for a comprehensive PM-10 air quality study. Our cooperative effort on this issue continues, and our hope is that private industry and federal, state and local governments will be able to raise an additional $12 million over the next three years to fund this important study.

To date, this study project has benefitted from federal funding provided through USDA's, DOD's and EPA's budgets. In fiscal year 1993, $330,000 was provided through an EPA grant. In fiscal year 1994, a total of $2.85 million was appropriated for the study. In fiscal year 1995, $1.14 million was appropriated for PM-10. For fiscal year 1996, a total of $1.65 million was appropriated.

The following is a list of PM-10 research projects which are in progress:

- PLANNING
  Development of products for emissions, field monitoring, data analysis and modeling

- TECHNICAL SUPPORT STUDIES
  Suitability of data base; Winter/Autumn intensive study; micrometeorological parameters; fog formation/dissipation; ammonia from soils

- MODELING
  Demonstration of modeling system for application in SIP's

- DATA ANALYSIS
  Analysis of existing data to aid project planning

- DEMONSTRATION STUDIES
  Almond, fig, walnut, cotton, harvesting; unpaved agricultural roads; unpaved public roads; unpaved shoulders of paved roads; dairies, feedlots, poultry, dry cereal grain

For fiscal year 1997, our Coalition is seeking $1,161,500 million in federal funding through the U.S. Department of Agriculture to support continuation of this vital study in California. In the budget for the Cooperative State Research, Education, and Extension Service (CSREES), we request $436,500, representing one-half of the $873,000 historical baseline split between California and Washington in the past two budget cycles. Additionally, we request $600,000 from CSREES specifically targeted to California to

support and accelerate critical research activities underway at the University of California at Davis, and especially to provide support and funding for the development of control measures that have emerged from the project's research efforts to date.

In the budget for the Agricultural Research Service (ARS), we request that $125,000 of the PM-10 funding requested by ARS be directed to the ARS facility in Fresno, California, to assist the PM-10 study in coordination with UC/Davis.

The San Joaquin Valley PM-10 study will not only provide vital information for a region identified as having particularly acute PM-10 problems, it will also serve as a model for other regions of the country that are experiencing similar problems. The results of this study will provide improved methods and tools for air quality monitoring, emission estimations, and effective control strategies nationwide.

The Coalition appreciates the Subcommittee's consideration of this request for a fiscal year 1997 appropriation of $1.2 million for U.S.D.A. to support the San Joaquin Valley Region PM-10 Air Quality Study.

CENTER ON HUNGER, POVERTY AND NUTRITION POLICY

PREPARED STATEMENT OF DR. J. LARRY BROWN, DIRECTOR

Mr. Chairman and members of the Subcommittee:

I would like to thank you for providing me with the opportunity to once again submit testimony regarding the Center on Hunger, Poverty and Nutrition Policy. In so doing, I am continuing the dialogue between the Center and your Subcommittee which began a number of years ago.

Since the late Dr. Jean Mayer, former President of Tufts University, had the vision to create the Center -- and testified before this Subcommittee to seek its support -- I have appeared in person or have submitted testimony in the effort to maintain the extraordinary partnership that he initiated. Dr. Mayer believed that Tufts' well recognized expertise in nutrition, research and policy could and should be directed to overcoming the awful problem of hunger in this country. I am pleased and honored to be involved in carrying out his dream.

With your assistance, our Center is making a difference and will continue to do so in the future.

Let me briefly review the history of this project. Several years ago, the Department of Agriculture performed a feasibility study to examine the value and need for a facility to house this Center. Following a unanimous recommendation by the review team, this Subcommittee, along with your counterpart in the House, made available a series of annual appropriations which have put us on the way to completing this effort. This year we are requesting $4.7 million. With this appropriation, your Subcommittee will have fulfilled the federal share of $12 million necessary to complete this project. As I have noted in the past, Tufts University has single-handedly operated and staffed the Center and it is committed to doing so in the future.

Dr. Mayer often remarked that the problem of hunger in America was extraordinary, not simply because of its scope, but because as a nation we have been so unsuccessful in dealing with it. Year after year, Congress makes available enormous funds to feed hungry Americans. As you know, by linking research to sound educational programs, our Center can and is making a vital contribution to targeting our taxpayers' dollars in such a way that with each year we can do a better job of feeding our hungry.

Broadly, examples of the work we do include evaluation of programs to determine what works and what does not; analysis of child poverty trends; determination of the extent of hunger among key population groups and the presentation of symposia on Capitol Hill to present results.

In closing, let me restate my gratitude for the opportunity to submit testimony today. All of us associated with Tufts University and the Center are extremely proud of the public-private partnership which you have initiated. We are honored by the trust you have placed in us and we look forward to completing our facility and getting on with the important work of intelligently meeting the needs of the hungry in America.

Thank you.

CENTOCOR, INC.

PREPARED STATEMENT OF DAVID P. HOLVECK, PRESIDENT AND CEO

I am pleased to have the opportunity to submit this statement to your subcommittee and to provide you with an update on progress we have made in working with FDA as a partner in bringing innovative drug and diagnostic products to the market over the past year.

Centocor is the largest biotechnology company in the state of Pennsylvania. We employ over 300 people in the Philadelphia suburbs and nearly 600 worldwide. We focus on development, manufacturing and marketing diagnostic and therapeutic products for human health care which are used in managing patients with infectious, cardiovascular, autoimmune diseases, and cancer.

Although the great majority of Centocor's interactions with FDA have been very positive, we have recommended that Congress and FDA consider and support a few narrowly-focused administrative changes in the regulation of certain *in vitro* diagnostic products known as IVDs. IVDs are the routine blood and urine tests which all of you have likely experienced as part of a physical examination.

Last year we also suggested that a few, again narrowly focused, legislative changes could result in major improvements in the efficiency with which the agency applies its limited resources. The substance of these suggestions has been incorporated into HR 2290 sponsored by Congressman Jon Fox.

The focus of our comments is to update you on progress on two key administrative initiatives: Reclassification of tumor markers and classification of analyte-specific reagents.

Tumor markers are laboratory tests which physicians use to help manage their care of cancer patients. Though these tests are widely available elsewhere in the world, only five types of tumor markers have ever been approved in the U.S. during more than 20 years of regulation by FDA. Analyte-specific-reagents are the biochemical raw materials, or active ingredients, which clinical laboratories use to develop and produce innovative laboratory tests for specialized and limited testing purposes. In the past 10 years, these esoteric, yet important, reagents have been subject to wide-ranging and often fitful regulatory policies.

FDA, with encouragement from its constituent base in the clinical laboratory and medical professions as well as Centocor's industry colleagues, has acted on our petition seeking reclassification of tumor marker tests from class III to class II.

FDA, again with encouragement and support from these same groups, has also initiated its own effort to classify analyte-specific reagents as class I devices, exempt from 510(k) notification.

Both of these initiatives are consistent with the interests of FDA, the clinical laboratory and medical professions and the patients for whose care we all share a portion of responsibility. The changes will assure the continued availability of these important and innovative products and will help to assure that the advance of new technology will not be negatively impacted due to application of inappropriately stringent regulatory controls applied to these lower risk, intrinsically safe laboratory tests.

These initiatives began moving ahead last April, following a meeting between Centocor and senior FDA staff from CDRH and CBER. While the meeting was extraordinarily useful and productive, the agency acknowledged that action on classification and reclassification initiatives, such as those I have just described, historically has taken two-to-eight years to complete.

Thanks largely to the personal energy and efforts of Dr. Burlington and his staff at CDRH and to Mr. Schultz in the commissioner's office, work on these two initiatives has moved well ahead in the past year.

During that time, FDA has devoted considerable attention to reclassification of tumor markers and classification of analyte-specific reagents. Most recently, in December and again in January, special FDA advisory panels met and voted, unanimously, to support these proposals. In mid-March, the agency published a notice of proposed rulemaking (NPRM) in the Federal Register outlining its plans to regulate analyte-specific reagents as class I, 510(k) exempt IVDs. As of today, we know that the agency is continuing its work on our reclassification petition, but it has not moved to publication of an NPRM - the next administrative step. As you know, neither of these important initiatives can become effective until final rules are published in the Federal Register.

We thank Congress for its support and applaud FDA for being quick to begin action on these initiatives. We also would like to take this opportunity to ask this subcommittee to continue its interest in these matters and to encourage FDA to complete this important work in a speedy and successful manner. FDA's constituents in the medical and clinical laboratory professions, the IVD industry and within the agency itself, all support these initiatives; FDA's expert advisory panels have voted unanimously to undertake these changes. With this broad base of support and these significant milestones behind us, we see no regulatory, scientific or practical reasons impeding FDA from final completion of the necessary rulemaking procedures in 90 days or less.

Mr. Chairman, we respectfully request that you and this subcommittee seek answers to the following key questions from the agency:

1. What is agency's plan and time frame for publication of a proposed rule classifying tumor markers from class III into class II?
2. What is the agency's plan and time frame for publication of a final rule classifying tumor markers from class III into class II?

3. What is the agency's plan and time frame for publication of a final rule classifying analyte specific reagents as class I, 510(k) exempt *in vitro* diagnostic devices?
4. What issues, if any, prevent publication of final rules in the Federal Register, making each of these changes effective within less than 90 days from today, April 17, 1996?

Again, while the agency, along with Centocor and its industry colleagues, have made significant progress and have established a good partnership, neither tumor marker reclassification, nor analyte specific reagent classification, can become effective until FDA publishes final rules in the Federal Register. Until that time, neither FDA nor industry will begin to benefit from the significant efficiencies that these initiatives provide. We encourage the agency complete this work in a speedy manner - and much more quickly than the historical two-to-eight year time frame. We would be grateful for the assistance that the members of this committee can provide in helping us to accomplish this goal.

Mr. Chairman and Members of the Subcommittee, our experience with FDA over the past year should serve as a model of how FDA and industry can work together in a productive and efficient manner. There are also a number of other equally positive examples from the past year which point to a clear change in the relationship between FDA and the pharmaceutical, biotechnology, IVD and medical device industries. Continued focus on flexible and innovative administrative approaches to improving efficiency, clearly diminish, but do not eliminate, the need for limited legislative reform. We recognize that these legislative issues are within the jurisdiction of the authorizing committees, however, we urge you all to use your significant influence to support limited legislative change. And, especially those changes which seek to reduce the regulatory impact on IVDs and other intrinsically safe, lower risk devices.

With your assistance and the promise of success in our immediate future, we look forward to continuing to contribute to building a productive partnership between industry and FDA.

CHILDREN'S NUTRITION RESEARCH CENTER

PREPARED STATEMENT OF DENNIS BIER, M.D., DIRECTOR

Mr. Chairman and members of the Subcommittee, thank you for the chance to report to you on behalf of the Children's Nutrition Research Center (CNRC). The Children's Nutrition Research Center was established in 1978 and operates under a cooperative agreement between the Agricultural Research Service (ARS), Baylor College of Medicine, and Texas Children's Hospital. This is a unique public/private partnership between the ARS and two of the nation's leading pediatric research institutions, and it also draws on the resources of the world's largest medical center.

I especially thank you for your consistent support for the ARS human nutrition research program in general and for the CNRC in particular. The funding which you have provided for this program has been a wise investment, and the recent trend of scientific discoveries continues to underscore the increasing importance of nutrition research.

The CNRC has been, and continues to be, a world leader in nutrition research. The Center is the best-equipped facility of its kind in the nation and, therefore, we can undertake many research projects that no other research laboratory can do. This is particularly valuable in light of the ever-growing body of evidence detailing the intimate relationships linking genotype, lifestyle, and diet to health. We now know that heredity, how a person chooses to live, and what an individual chooses to eat plays a very large role in determining whether he or she leads a long and productive life or is more likely to suffer early disability or death from chronic disease.

The need for quality scientific research involving children and their mothers becomes more apparent with each morning's newspaper. Discovery after discovery is pointing to the importance of nutrition for the maintenance of good health and the prevention of disease. Eight days ago a lengthy article in the New York Times reported that good habits, including diet and exercise, are the key to a healthy old age and that serious losses in physical and mental functioning are not inevitable (2/28/96, p.B9).

Obesity

Obesity, for example, is a major public health problem in our country. The latest National Health and Nutrition Examination Survey (NHANES III) highlights the sad fact that one-third or more of American adults and children are overweight, and obesity is a central determining risk factor for diabetes, high blood pressure, heart disease, and other health problems that are very expensive to our society. These risks have been shown to start in childhood.

The last year was perhaps the most significant year in the history of obesity research. Researchers have now identified the first known genes that are responsible for the regulation of body fat and appetite. The product of one of these genes is an entirely new hormone, leptin, which is produced by the body's fat cells. The importance of this discovery is illustrated by the fact that Amgen Pharmaceuticals paid $20 million for an exclusive license to develop leptin-based products (Science July 28, 1996, p.25).

Determining the structure of leptin and developing a method to measure it in blood led to the identification of the gene responsible for the brain receptor that leptin acts on to regulate food intake. We now know that obesity in some adults is genetic -- the result of a faulty leptin receptor. Their brain switch does not respond to the signal that it's time to stop eating. This is the first direct connection between modern molecular biochemistry and the psychosocial regulation of eating behavior. In other words, we have just learned for the first time the molecular basis for a behavior that leads to obesity.

Since the discovery of leptin, at least two more hormone systems with brain receptors that regulate appetite have been found. And, in related work, other investigators showed in mice that disruption of the normal pattern of inheritance of a growth factor gene results in baby mice that are 27% heavier at birth and remain overweight throughout life.

Absolutely no research on children has yet been done on the genetic basis of obesity. There is a huge need for such work, which could identify children with the potential for obesity at a very young age and allow a carefully modified diet to become a life-long habit. Obesity research has been a fundamental part of the CNRC's mission since its establishment. We are uniquely well-positioned to take on the task because, unlike most other institutions with expertise in molecular biology alone, we have the specialized facilities for measuring energy expenditure and body composition in children and for coupling these measurements with the basic molecular findings.

Diet and Health

We already know that five of the ten leading causes of death in the United States -- heart disease, cancer, stroke, diabetes, and atherosclerosis -- are attributable, at least in part, to diet. Most, if not all, of these begin in childhood.

We currently make general nutritional recommendations for the whole population, because we do not know which specific individuals are at risk. The typical American's practical nutrition habits too often become focused on avoiding things that they have been told are bad -- meat, milk, charbroiling, or whatever else is politically correct that week.

We now have the tools, through advances in genetics and molecular biology, to aggressively investigate prevention of diet-related problems such as obesity, high cholesterol, and certain types of cancer. If we can identify the risk factors in childhood we could then target our efforts and our scarce funds on that at-risk group. Identifying the specific individuals at risk and preventing the exposure to these risks in childhood will pay health dividends to society for many decades, while treating the consequences of these risks in adulthood involves much greater expense and far fewer benefits. Prevention would use money more efficiently, and it would also give our other citizens the freedom to choose, guilt-free, a lifestyle that allows them to enjoy the genes that God gave them.

Human Nutrition Research Funding

Treatment for diseases linked to diet is estimated to cost more than $200 billion per year. Research that can produce even partially effective prevention measures would obviously be a good investment.

In fact, the ARS human nutrition research program as a whole is very well-placed strategically, thanks to the foresight of Congress, to tackle these critical research issues. Congress expanded this network in the 1970's and has provided needed research funding since then. The caliber of this research program is illustrated by the fact that two of the eleven members of the Dietary Guidelines Advisory Committee, Dr. Irwin Rosenberg of the Human Nutrition Research Center on Aging at Tufts University and myself, are Directors of these ARS Human Nutrition Research Centers. The Dietary Guidelines Advisory Committee members were selected from some 90 nominees representing the most respected human nutrition scientists in the country, and the Committee is charged by law with making dietary recommendations that must be followed in all U.S. food assistance programs.

However, ARS human nutrition research funding has been stagnant in real terms since the 1980s. The USDA food assistance programs cost about $40 billion per year, yet we are investing less than 0.2 percent of that amount in our human nutrition research program, of which the pediatric nutrition research investment is about 0.04 percent.

During a time of significant inflation in the cost of doing research, the CNRC had no funding increases from FY90 through FY95. Last year you provided the CNRC a greatly-appreciated increase of $225,000, approximately 2 percent of our appropriation, which we are using for new research into nutritional antecedents for chronic diseases.

In a major shift from past policy, we have tried to compensate for the overall reduction in real spending power over the last six years by aggressively seeking research funding outside the ARS. We are working with national research funding agencies, with companies representing agricultural producers and processors, with the agricultural biotechnology industry, and with other research institutions. We recently won a $1 million Department of Defense research award to study pregnancy-induced changes in military and civilian women and a $1.7 million NIH award to study bone growth and calcium requirements in adolescent girls. We currently have research funding from seven non-federal sources, including six private-sector and one international.

We have also tried very hard to cut expenses. I testified last year that we had reduced administrative support staff by 33% in the previous two years, and overhead costs from 30% of expenditures to 19% during the last five years. However, we have reached the limits of real cost savings by these approaches.

We will have great difficulty in addressing many of the newly-opened and very promising areas of nutrition research without additional ARS funding. For example, we need approximately $500,000 to fund a new group of scientists if we are to pursue the research on the genetics of obesity that I mentioned earlier. This is not only a very high scientific priority, but it would also be a very good investment on the part of Congress, because we can leverage that funding by recruiting a group of scientists who have won, and would be expected to continue to win, a significant part of their research funding competitively from non-ARS sources.

CNRC's Programs

During this last year the CNRC has continued to be the nation's leader in nutrition research involving children and pregnant and lactating women. Our role is to support both consumers and agricultural producers and processors with good science. We do not hype our discoveries, and we do not try to play political games by labeling certain foods as "bad." We simply try to do good science and seek answers that will help families raise children that have the physical and mental health to reach their maximum potential as contributing members of society.

We can document that information developed by the CNRC was used last year in 850 newspaper articles (a 62% increase), 28 articles in general interest magazines and 19 in specialty magazines, and 32 radio and 19 TV shows. This means that we reached a potential audience of 47.9 million people. Our telephone requests for information are up 36%, and our just-started internet web page was recently rated in the top 5% of all web sites. We are also sending out a quarterly newsletter that is available to all extension agents by electronic mail.

Glutamate

One good example of the unique value of the CNRC involves glutamate. Some past studies had claimed that glutamate was unhealthy when added to foods as the common flavor enhancer known as monosodium glutamate, or MSG. The fear of MSG has been generated in large part by studies which, in my opinion, assume consumption in quantities which will never happen in the real world.

To investigate this issue by using specialized stable, non-radioactive isotope techniques developed at the CNRC, we established a collaboration with the Ajinomoto Company which synthesized for us a unique stable isotope form of glutamate that is otherwise unavailable from commercial suppliers. This unique tracer allows us to identify the intact labelled glutamate molecule in the presence of all the other glutamate usually present in the body.

Using this specialized glutamate tracer, our researchers showed unequivocally that almost all of the glutamate added to the diet is broken down in the gut, and that the remainder is used to produce glutathione, a key immune system antioxidant that helps to fight bacteria and neutralize toxins. In other words, CNRC scientists demonstrated that dietary glutamate is actually essential to good health. These findings provide a firm scientific basis for the recent Life Sciences Review Office report that dietary MSG is safe for human consumption.

As a result of this work, we are now beginning a study to test whether the increased susceptibility to disease of people who are malnourished or are fed only intravenously may be due to the fact that they have no glutamate supply coming into the gut to maintain that part of their immune system. If this idea tests out then it may lead to major changes in our approach to intravenous feeding.

Recommendations

I have tried to describe how the CNRC is a truly unique, world-class research program in a field that is increasingly being recognized as critical to health maintenance and to food production. Specifically, I focused on glutamate, a research question important to the food industry which CNRC scientists settled conclusively by using the specialized stable isotope techniques available within the Center. I also talked about a new research field, the interactions of genetics and diet that lead to obesity, which the Center urgently needs to enter on a large scale if we are to most effectively carry out our mission of maintaining health and preventing disease.

Top-quality basic nutrition research is of increasing importance, and the multi-disciplinary ARS human nutrition research centers are uniquely well-suited to this task. We need a significant budget increase, and you would get a very good return on that investment. I urge the Subcommittee to make every effort to provide a substantially greater level of funding for these centers this year. If increased appropriations are not available, I would suggest that you direct ARS to do a basic assessment of this program area, the need for funding, and how research needs can most effectively be prioritized and addressed. Such a study would document much more clearly than I can the needs and huge potential rewards both in cost savings and in good health in this critical area of research.

I would invite you, Mr. Chairman, and any members of your Subcommittee to come and visit the CNRC. Several of your staff members have visited over the years, and they can testify that the program is much more impressive in person than I can make it in my description. Thank you for the opportunity to visit with you and thank you for your support. I would be glad to answer any questions that you might have.

COALITION OF EPSCoR, UNIVERSITY OF ARKANSAS

PREPARED STATEMENT OF DR. DON PEDERSON, VICE CHANCELLOR, ACADEMIC AFFAIRS

My name is Don Pederson. I am Vice Chancellor for Academic Affairs at the University of Arkansas, Fayetteville. I am submitting this testimony on behalf of the Coalition of EPSCoR States and the nineteen states[1] that participate in EPSCoR.

The primary mission of EPSCoR is to foster systemic and sustainable change in the capacities of universities in eligible states to support nationally competitive academic research. Its secondary objectives are to assure a broad geographic distribution of merit-reviewed research awards and access to quality education in science and engineering. In practice, EPSCoR also fosters enhanced interaction and cooperation in research and technology development among universities, state governments, and industries in participating EPSCoR states.

The National Science Foundation established the EPSCoR program in 1979 in response to Congressional concerns, raised by Congressman Thornton and others, about the concentration of Federal support for university research at a relatively small number of institutions located in a handful of states. Congress has expanded EPSCoR beyond NSF; and EPSCoR programs are now either underway or in the process of being established in six other federal agencies: the Departments of Agriculture, Energy, and Defense; the Environmental Protection Agency; the National Aeronautics and Space Administration; and the National Institutes of Health.

The EPSCoR program is intended to broaden participation in the Federally funded research initiatives that ensure this country's technological and scientific leadership. The future ability of the United States to meet the economic and health challenges of the next century depends, in large part, on building a truly national scientific and technical research infrastructure.

Characteristics of the EPSCoR States:

Presently, Federal research funding is concentrated in relatively few states and regions of the nation. The 18 EPSCoR states and Puerto Rico, while containing 15 percent of the United States population, receive only 6.6 percent of Federal research and development dollars. In contrast, the top five research states, with 27.9 percent of the population, receive 44.5 percent of Federal research and development dollars.

The EPSCoR Process:

EPSCoR is widely viewed as a model federal/state partnership. The EPSCoR approach involves the establishment of a statewide coordinating committee to:

- identify state and institutional barriers to competitive research;
- develop a comprehensive improvement plan supported by state and institutional resources;

---

[1] Alabama, Arkansas, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Montana, Nebraska, Nevada, North Dakota, Oklahoma, South Carolina, South Dakota, Vermont, West Virginia, Wyoming, and the Commonwealth of Puerto Rico.

-- undertake a merit review of all EPSCoR programs and;

-- implement the improvement plan focusing on infrastructure improvement, research enhancements, and human-resource development.

The result has been a significant improvement in state funding for research and development in the EPSCoR states. Federal support at our research universities, as a percentage of total spending for research and development, continues to lag significantly behind both the national average for Federal funding and the percentage of support provided to the top five states. On the other hand, state support in the EPSCoR states is twice the national average and over seven times as great on a percentage basis as it is in the state that receives the greatest amount of Federal research resources.

Strengthening the research infrastructure in the EPSCoR states is important to agricultural research which tends to be the strongest area of research and development within these states. One reason is the changing nature of agricultural research which is now more heavily dependent on engineering and basic science, particularly modern biology, than in the past.

The National Research Initiative Competitive Grants Program:

To encourage the widest participation of institutions, all academic institutions within USDA-EPSCoR States can apply to the Strengthening Awards Program. Proposals must relate to the program areas of the National Research Initiative Competitive Grants Program (NRICGP), which address the critical issues facing agriculture today. Because merit review is such an important part of EPSCoR, top scientists review all proposals. Four kinds of awards are made competitively: research career enhancement awards, equipment grants, seed grants, and strengthening standard research project awards.

Research career enhancement awards allow faculty to enhance their research capabilities. Funds are designated for faculty who have not received a NRICGP grant within the last five years.

Equipment grants are made to strengthen institutional research capacity. Each request is limited to one piece of research equipment that ranges in cost from $10,000 to $100,000. The amount requested cannot exceed 50 percent of the equipment's cost.

Seed grants enable investigators to collect preliminary data before applying for a standard research grant. Funds are designated for faculty who have not received a NRICGP grant within the last five years. Awards are limited to $50,000, including indirect costs, for two years.

Strengthening standard research project awards fund standard research projects of investigators who have not received a NRICGP grant within the last five years.

As part of its fiscal year 1997 budget request of this Subcommittee, we expect the Department of Agriculture to request additional funding for the National Research Initiative Competitive Grants Program. It is our purpose before this Subcommittee to urge your support for efforts to assure that EPSCoR states are not left out of this Initiative as it moves forward. Absent a specific program to assure improvement in our ability to compete, history would indicate that the majority of funds will once again find their way into a small number of states with established, largely Federally funded, scientific infrastructures.

We are pleased that the Department of Agriculture has traditionally set aside 10 percent of the funds in this program for "research strengthening grants." We are concerned, however, that this effort will not be carried forward into fiscal year 1997 unless Congress again directs that a portion of the funds be used for this purpose.

Therefore, we would suggest the following guidelines for a program to assure reasonable geographic distribution in the awarding of Initiative grants:

1) We ask that, as they did for the last years, the Appropriations Committees set aside 10 percent of the funds in fiscal year 1997 for the EPSCoR initiative. These awards should be coordinated through the individual state EPSCoR committees to assure support for the state's overall effort to improve its infrastructure; to increase the number and quality of grant applications submitted by its researchers; and, ultimately, to enhance each states ability to compete successfully in the high-tech economy.
2) A goal should be established to have 20 percent of the actual research grant awards made to EPSCoR states. If the number of high quality research proposals submitted from EPSCoR states is not sufficient to reach this goal, the Department of Agriculture could report this determination annually to the Congress, together with their suggestions for additional infrastructure improvements to allow the goal to be reached.

As an illustration of how this has benefited our Arkansas science and technology effort, let me cite for you a few examples. Since 1991, the University of Arkansas has received a four-fold increase in the number of awards and annual funding level from USDA competitive grants. Some important recent awards are for a study of nutritional supplements to enhance southern pine beetle parasitoid effectiveness, for a study of the relationship of soil phosphorus levels to runoff phosphorus concentrations, and for a study of adding value to broiler litter with increased consumption by ruminants. These and other research projects made possible by the program address problems critical to the agricultural economies of a number of states including Arkansas

Conclusion:

The state-based nature of EPSCoR is directly responsive to concerns about the concentration of research in a small number of institutions in a way that institutional programs intended to foster research are not. Other advantages include encouraging cooperative efforts among universities in states with limited resources, developing a broad base of research scientists with expertise related to an agency's mission, and providing a critical mass around which a state's scientific enterprise can develop. In addition to fostering competition and geographical equity in the distribution of Federal research funds, participating states find real value in the EPSCoR program in an international economy driven by technology.

In closing, the Experimental Program to Stimulate Competitive Research urges fiscal year 1997 support for EPSCoR at the Agriculture Department. We believe it is an exciting program with great potential benefit for states such as Arkansas. It is a program that we believe will produce solid results in scientific research and education for the participating states and the Nation as a whole. We hope you will join us in supporting EPSCoR.

PREPARED STATEMENT OF THE COALITION ON SMOKING OR HEALTH

The American Cancer Society, American Heart Association and American Lung Association, united as the Coalition on Smoking OR Health, present the following statement addressing FY 1997 appropriations under the Subcommittee on Agriculture, Rural Development and Related Agencies. The Coalition works to inform public policy makers about tobacco and disease prevention and to promote policy initiatives designed to reduce tobacco use. Despite our efforts, tobacco use continues to be the number one preventable cause of premature death and disease in the United States.

In this statement we wish to address two main issues, U.S. policies in support of the growth of tobacco and the proposed initiative by the Food and Drug Administration to reduce youth access to tobacco.

As we have done on a number of past occasions, the Coalition on Smoking OR Health would like to address the tobacco-related expenditures of the USDA. Although the tobacco support program is called a "No-Net-Cost" program, the U.S. taxpayer still finances over $16 million annually to administer the program and appropriates $27 million for additional tobacco-related expenses such as extension services, forecasting, agricultural statistics, world market analysis, inspection and grading and crop insurance These tobacco-related expenditures would be significantly higher if not for the cuts made by this panel during past appropriations cycles. As recently as FY 1993, $8 million dollars was spent on tobacco-related research. Much of this research was aimed at enhancing the production and marketing of tobacco.

These expenditures continue to send a mixed message to the American taxpayer. Tobacco, a highly addictive drug, is responsible for over 400,000 deaths each year in the U.S.. On the other hand, policies of the USDA assure that federal assistance and tax dollars support the growth and use of tobacco products. U.S. policy should not continue policies and programs that encourage and promote the growth of tobacco. The cost of administering the program and related activities should be borne by the industry which benefits from its programs. We do, however, strongly believe that the nation's tobacco farmers have been mistreated by the U.S. tobacco industry. While the tobacco farmers' share of the value of tobacco products has plummeted from 16 percent of every dollar's worth of tobacco products sold in 1957 to a mere 3 percent in 1991, the tobacco industry's share has increased to over 60 percent.

In 1969, U.S. manufactured cigarettes contained 90 percent American-grown tobacco. By the 1990's, that figure has dropped to barely 60 percent. While American tobacco companies continue to expand their overseas manufacturing and growing investments, tobacco manufacturing jobs in the U.S. fell from 1982-92 by 19,600 jobs, a 29 percent decline. Over a similar period, the total number of tobacco farms fell by 42,000, a 23 percent decline. Federal funds would be better spent facilitating the growth of alternative crops and improving access to markets for other crops than helping to support the growth of tobacco in a declining market.

A November 1995 study released by the Center for Sustainable Systems and the Bowman Gray School of Medicine at Wake Forest University reveals tobacco farmers' attitudes toward diversifying their farms and lessening their financial dependency on tobacco. Their *U.S. Tobacco Farmers' Opinion Study* was conducted among a geographically and economically diverse group of growers. Among their findings.

- 67% of tobacco farmers under 45 years of age were "interested" or "very interested" in trying other on-farm ventures to supplement or replace tobacco

- 72% cited a lack of processing facilities for other crops as a barrier to diversification, 60% cited lack of capital, and 57% through low-interest loans would be needed.

The group also polled the general public regarding tobacco farming:
- 75% believed the U.S. government should not subsidize tobacco farmers.
- 57% favored tax money going to programs to help tobacco farmers diversify,
- 66% believed the government should actively help farmers find other ways to make a living.

Let's redefine U.S. policy towards tobacco. Last July the House fell just a few votes shy of passing Representative Durbin's floor amendment to the Agriculture Appropriations measure which would have restricted taxpayer funds for tobacco-related expenditures in the USDA. The Coalition on Smoking OR Health urges this subcommittee's support for a similar amendment this year, in addition to passing on the administrative costs to the tobacco industry.

Our second item of importance is the President's proposal to curb youth access to tobacco. Our Coalition and more than 150 of its partners from the health, education, religious and community service sectors strongly support regulations proposed by the FDA to restrict youth access to tobacco. The proposed rule is intended to reduce tobacco use by children and adolescents. It would limit minors' access to cigarettes and smokeless tobacco through restrictions on cigarette and smokeless tobacco sales, and it would also help reduce the appeal of tobacco products to young people by restricting advertising and promotion. The goal of the proposed rule is to help the Nation reduce the number of children and adolescents who use tobacco products by roughly 50 percent within 7 years after publication of the final rule.

It is estimated that as many as 1 billion packs of cigarettes are consumed annually in the U.S. by minors under 18 years of age. *Advertising Age* reported Camel brand name recognition rates of 90 percent among children 8-13 years of age. It is no small wonder that according to an article appearing in the April 1996 *Journal of Marketing*, Cigarette advertising appears to influence the smoking behavior of adolescents three times as much as among adults. The study concludes that "scholars should treat the assertion that cigarette advertising has little or no effect on adolescents as naive or disingenuous."

It puzzles us to find t hat some of the same members of Congress who support overhauling the FDA, presumably to save lives and improve quality of life through acceleration of drug and device approval processes, oppose the proposed restrictions on youth access to tobacco, the nation's leading killer. Almost 3,000 children start smoking every day and 1,000 of them will be hooked by nicotine addiction and die prematurely of a tobacco-related disease. The members of the House should support the proposed restrictions on the sale and marketing of tobacco products.

Unfortunately, on this state and local level, massive expenditures of lobbying dollars by the tobacco industry have resulted in ineffective youth access laws being placed on the books -- laws often drafted by the tobacco industry -- paper tigers addressing youth access on the surface only. On the federal level, 25 to 35 years ago, the tobacco industry successfully lobbied for the exemption of cigarettes and stuff from almost all major consumer protection legislation, including the Consumer Product Safely Act, the Fair Packaging and Labeling Act, the Federal Hazardous Substances Act, and the Toxic Substance Act. In addition, states and localities are preempted by federal law from imposing prohibitions or restrictions based on smoking and health with respect to the advertising and promotion of cigarettes. This affects visual media, billboards and point of sale materials. Because of these federal restrictions and frustration with the limitations of their own laws, 28 state attorneys general have written to the FDA in support of the proposed regulations.

As a product that is shipped, sold and marketed in interstate commerce, tobacco must be subject to fair federal manufacturing and marketing standards. The FDA is the most appropriate agency to carry out those responsibilities. The Food, Drug and Cosmetic Act gives the FDA the authority to oversee drugs and devices. Drugs are articles intended to "affect the structure or function of the body." Nicotine is a drug and cigarettes and smokeless tobacco products function as "drug delivery devices" which bring nicotine to a site in the body where it is absorbed. As I mentioned previously, use of tobacco is the nation's single most preventable cause of death. Failure to maintain authority over tobacco products is a failure of the agency to carry out its statutory responsibility.

Further, the additional burden on the FDA will be far less than touted by opponents of the proposed rule. While the agency regulates approximately 33,000 food, drug and device manufacturers, oversight of the sale and marketing of cigarettes and smokeless tobacco products, the nation's single most preventable cause of death, will place only seven additional companies (two of which manufacturer nearly 70 percent of U.S. tobacco products) under its jurisdiction. Most of the provisions in the new rule will be self-enforcing. Any actions to be taken by the FDA simply fall under its current powers of enforcement under the Food, Drug and Cosmetic Act.

Since the proposed regulations were published the case for support has continued to build. In recent weeks, a number of former tobacco industry employees have come forward to cite discrepancies in testimony presented by tobacco industry executives before the former Energy and Commerce Committee during the 103rd Congress. For Example, in a sworn affidavit filed with the FDA, Dr. Ian L. Uydess, a former associate senior scientist at Philip Morris, reported that "nicotine levels were routinely targeted and adjusted by Philip Morris in its various products." He further stated, "A number of scientists like myself... believed that nicotine was the critical component of tobacco that motivated people to smoke," and that they "routinely applied (their) knowledge of selective tobacco blending to achieve desired nicotine levels."

The public's support continues to build as well. A recent poll found that

- 89 percent of the American public supports efforts by the FDA as well as state and local governments to take more actions to prevent children from using tobacco
- 88 percent of Americans think that their members of Congress should support the proposed Actions by the FDA to stop the sale and marketing of cigarettes to children.

We urge your opposition to any efforts to weaken, delay or preempt this lifesaving proposal, inlcluding the recent plan unveiled by Philip Morris and U.S. Tobacco. Although some of the provisions are worthy of support, they have simply been placed upon the table as a quid pro quo for dismissal of FDA jurisdiction over tobacco products. Overall, these companies have offered up a trojan horse of a proposal, with many of its provisions appearing to accomplish public health goals while actually doing very little. We urge you to cast a dubious eye upon such proposals which fail to meet the President's criteria for reducing the appeal of and access to tobacco products by minors

The Coalition on Smoking OR Health thanks you for the opportunity to submit our position to this subcommittee

COLORADO RIVER BASIN SALINITY CONTROL FORUM

PREPARED STATEMENT OF JACK A. BARNETT, EXECUTIVE DIRECTOR

Dear Senator Cochran:

In 1984, the Congress authorized a Colorado River Basin salinity control program for the Department of Agriculture. Since that enactment, the Colorado River Basin Salinity Control Forum has sent to you testimony in support of appropriations for that program. We have very much appreciated over the years your support and the support of the Committee with respect to the needed funding for the program that the seven Colorado River Basin states judge to be very important as a part of the effort to control the water quality and to comply with water quality standards on the Colorado River.

The Basin states have now come to realize that with the passage of the Federal Agriculture Improvement and Reform Act of 1996 (PL 104-127), the funding for the Colorado River salinity control program will be provided for under the newly authorized provisions found specifically in the Environmental Quality Incentives Program (EQIP). We have further come to learn that this funding will be accomplished through what has been termed mandatory funding and, hence, the salinity control program will not rely upon discretionary funding that has previously been the responsibility of the Agriculture, Rural Development and Related Agencies Subcommittee. Therefore, we have not prepared more lengthy testimony and only ask that you retain this letter as a part of the formal record being kept by your committee.

I again want to express the appreciation of the seven Colorado River Basin states for your previous support, and urge that from time to time, as issues concerning the Colorado River salinity control program come to your attention, you will continue to recognize the importance of this program and support this program.

Sincerely,

Jack A. Barnett

Jack A. Barnett
Executive Director

COLORADO RIVER SALINITY CONTROL PROGRAM

PREPARED STATEMENT OF GORDON W. FASSETT, WYOMING STATE ENGINEER

This testimony requests Fiscal Year 1997 funding for the Department of Agriculture in the amount of $9,800,000 in "Federal Assistance" (cost-sharing) funds for the Colorado River Salinity Control Program and adequate funding for National Resource Conservation Service technical assistance and Cooperative State Research Education and Extension Service information and education efforts associated with the Colorado River Salinity Control Program.

This testimony supports Fiscal Year 1997 appropriations for the Department of Agriculture to carry out Colorado River Salinity Control Program activities. You recently received testimony from the Colorado River Basin Salinity Control Forum (Forum) on behalf of the seven Colorado River Basin states that was submitted by the Forum's Executive Director, Jack Barnett. The State of Wyoming, a member state of the Forum, concurs in that testimony and the justification provided therein relative to the critical importance of this Program to the seven Colorado River Basin states and the maintenance of the basin-wide Water Quality Standards for Salinity.

In addition to being the Wyoming State Engineer, I represent the State of Wyoming on the Colorado River Basin Salinity Control Forum and the Colorado River Basin Salinity Control Advisory Council. The 1974 Colorado River Basin Salinity Control Act (Public Law 93-320) created the Advisory Council. Like the Forum, the Advisory Council is composed of gubernatorial representatives of the seven Colorado River Basin states, and serves as a liaison between the seven States and the Secretaries of the Interior and Agriculture and the Administrator of the Environmental Protection Agency (EPA). It advises these Federal officials and the involved agencies on the progress of efforts to control the salinity of the Colorado River and annually makes funding recommendations, including the amount believed necessary to be expended by the USDA for its onfarm Colorado River Salinity Control (CRSC) Program. The Forum's testimony is in accordance with the Advisory Council's written recommendations.

With the benefit of studies and analyses made by the Department of Agriculture and the Colorado River Basin Salinity Control Forum, the Advisory Council has concluded that the Administration's request of $2,681,000 for Fiscal Year 1997 is not sufficient to keep the progress of removing salt and preventing additional salt loading into the Colorado River system on schedule with the Plan of Implementation. The Plan of Implementation and the numeric water quality criteria set for three Lower Colorado River stations constitute the State-adopted, EPA-approved, water quality standards for salinity the Colorado River. The Plan has specifically been jointly developed by the States and involved Federal agencies to ensure continuing compliance with the numeric water quality criteria for salinity. Falling behind the schedule set forth in the Plan raises vitally important questions about whether the Basin States can be assured that the water quality numeric criteria, a component of the Water Quality Standards for the Colorado River, will continue to be complied with in the future.

During its October, 1996 meeting, the Advisory Council recommended that at least $9,800,000 be expended by the Department of Agriculture for cost-sharing to implement salinity reduction practices ("Federal Assistance" funds that are matched with individual contractor's cost-share funds) in Fiscal Years 1997 and 1998. Should a lesser funding level be provided for on this important basin-wide water quality program, the progress (as measured in tons of salt prevented from entering the Colorado River system) achieved by the USDA component of the multi-agency, state and federal Colorado River Basin Salinity Control Program will fall far short of meeting the rate of salinity control determined to be determined to be necessary in the Plan of Implementation.

Accordingly, if less salt is removed from the Colorado River than called for in the Plan of Implementation, it is apparent that the salinity levels of Colorado River water at the three downstream stations will in the future likely exceed the numeric criteria values established for those stations. Further, it is unmistakable that funding shortfalls will result in significantly higher costs to implement the same level of salinity control through the CRSC Program in future years. Farmers and agricultural producers in the areas of Colorado, Utah and Wyoming where the Program's salinity control efforts are underway are patiently waiting for the appropriation of funds to the Department of Agriculture so that they can match their 30 percent local-cost sharing against those federal funds and proceed with the installation of measures to reduce salt loading into the Colorado River system.

Literally hundreds of producers have indicated their desire and intent to participate in this Program - but are unable to do so on account of the lack of Federal cost-sharing funds.

The recently enacted Federal Agriculture Improvement and Reform Act of 1996 (Public Law 104-127) provides for the CRSC Program to continue in the future - as a part of the Environmental Quality Incentives Program (EQIP). We view the inclusion of the Salinity Control Program in EQIP as a direct recognition on the part of Congress of the Federal commitment to maintenance of the water quality standards for salinity in the Colorado River - and that the Secretary of Agriculture has a vital role in meeting that commitment. Unfortunately, the Administration's requested funding level of $2,681,000 for Colorado River salinity control falls far short of the level of commitment the Advisory Council believes to be appropriate. We respectfully request your Subcommittee increase funding for Federal Assistance cost-sharing dollars for this Program to $9,800,000 for Fiscal Year 1997 and ensure that the Department of Agriculture is directed to provide adequate funding for the important technical assistance and information and education efforts associated with this Program.

I wish to thank you for the opportunity to submit this testimony and would request, in addition to your consideration of its contents, that you make it a part of the formal hearing record concerning Fiscal Year 1997 appropriations for the Department of Agriculture. In accordance with the Subcommittee's direction, I have submitted five copies of this statement.

PREPARED STATEMENT OF COLORADO STATE UNIVERSITY

Mr. Chairman, Members of the Subcommittee, my name is Judson M. Harper. I am Vice President for Research & Information Technology at Colorado State University, located in Fort Collins, Colorado. I appreciate this opportunity to submit my testimony for the record of proceedings on the Fiscal Year 1997 Agriculture, Rural Development & Related Agencies appropriations.

You may recall that I have appeared before this Committee several times before to request your support for the Animal Reproduction & Biotechnology Laboratory. Colorado State University initiated its appeal to Congress for assistance with the construction costs of a new Animal Reproduction & Biotechnology Laboratory in 1991. This project consists of a 22,000 square foot new facility and renovation of a 14,000 square foot adjacent facility. The total project cost for construction, renovation and new equipment is $5.2 million. We have had the nonfederal match, in cash, on hand for some time.

A feasibility study was requested in the FY 1993 Agriculture & Rural Development Appropriations Bill. A team from the U.S. Department of Agriculture visited the campus of Colorado State University and examined its on-going program in animal biotechnology. This team found significant expertise among the faculty at Colorado State University, and agreed that the research proposed meets current USDA needs and was not duplicative of activities on-going elsewhere. Planning money in the amount of $340,000 was provided in the FY 1994 Agriculture & Rural Development Appropriations Bill.

The FY 1995 Agriculture & Rural Development Appropriations Bill provided $1.23 million to begin actual construction of the Animal Reproduction & Biotechnology Laboratory. Last year, I came before you to request the final installment of $1.1 million, with hopes of its inclusion in the FY 1996 Appropriations Bill; however, no funds were so provided to Colorado State University for completion of the Laboratory.

I am seeking your support for the final installment of the federal share in this valuable project and ask that you provide the remaining $1.1 million to complete it.

To refresh your memory, researchers and faculty at the Animal Reproduction & Biotechnology Laboratory have been, since the 1940s, leaders in the field of animal reproduction and biotechnology research. This tradition continues.

Examples of recent research include:

a. Development of artificial insemination procedures using low numbers of sperm that have been sorted for the X and Y chromosomes to produce calves of predetermined sex;

b. The first pregnancy of a mare following *in vitro* fertilization;

c. Development of procedures to dramatically increase the reproductive potential of genetically superior cows;

d. Production of transgenic sheep and/or cattle that secrete valuable proteins into their milk for use in combating disease;

e. Promising results in the development of methods for chemical castration of domestic animals, wildlife species and pets.

Research performed and short courses taught by the faculty of the Animal Reproduction & Biotechnology Laboratory have led directly to at least 15 commercial embryo transfer businesses in Colorado and more than 30 others in the Rocky Mountain region.

In addition to the impact on animal biology, researchers at the Animal Reproduction & Biotechnology Laboratory have made vast contributions to improving the health of humans. Significant advances in the understanding of animal biology and its relationship to human health issues have resulted from work at the Laboratory, particularly in the areas of:

a. Infertility;

b. Use of transgenic products in medicine; and,

c. New immunization technologies for human and animal diseases.

Continued pursuit of priority research objectives has been hampered by the fact that the Laboratory is actually three separate facilities, separated by three to four miles. Furthermore, existing facilities are overcrowded and outdated. The lack of a centralized facility has hampered interaction between faculty and students, made communication difficult, and has caused inefficiency in several areas of research.

Colorado State University was able to apply its matching funds, along with the federal appropriations, to complete Phase I and begin Phase II of the new Animal Reproduction & Biotechnology Laboratory. Phase I is complete, and a dedication ceremony was held in November 1995. At this time, Phase II is under construction but cannot be utilized. The facility cannot be completed without the final federal installment of $1.1 million. This represents our last request for the Animal Reproduction & Biotechnology Laboratory.

CONSORTIUM FOR INTERNATIONAL EARTH SCIENCE INFORMATION NETWORK

PREPARED STATEMENT OF SUSAN G. SCHRAM, PH.D., FOOD AND AGRICULTURE PROGRAM COORDINATOR

Mr. Chairman, I would like to thank you and the Subcommittee for your support in FY 1996 for **The USDA/CIESIN Global Change Data Assessment and Integration Project**, funded through the Agricultural Research Service (ARS). I am pleased to be able to report what we have accomplished with your help, and to highlight the importance of the continuation of the project.

Mr. Chairman, the Congress has recognized that complex challenges face the Department of Agriculture as society has become increasingly concerned about the interaction between agriculture and forestry, humans, and the environment. You have recognized that USDA scientific research data are key resources for sound agricultural policy making and that we must preserve, document and put to greater use the long-term scientific data and information that taxpayers have paid millions to collect.

Our project makes a unique contribution in that it has provided USDA agencies with the capacity to: (1) rescue and put to use valuable long-term scientific data that had been at risk of being lost; (2) provide state-of-the-art technical tools so that concerned farmers, ranchers, and citizens can directly participate in community decision-making about the uses of our land and forests; (3) access documentation on over 450 USDA data sets, 160 models and 173 geographic information systems applications related to agriculture and the environment, and, (4) assure that USDA benefits from new developments in electronic information technology. I would like to briefly review our accomplishments in these four areas, in order to inform you about the return received on USDA's investment in CIESIN.

Across the United States, vast amounts of long-term scientific agricultural and natural resource data lie untapped. Taxpayers have invested millions of dollars collecting data which are now at risk of being lost due to retirement of data custodians, inadequate documentation, or existence in single, hard copy format. A situation such as this existed in New Mexico.

To address New Mexico's data rescue needs, CIESIN formed a partnership with the Physical Sciences Lab (PSL) at New Mexico State University (NMSU). Due to continued funding, we have been able to conclude a two-year pilot data rescue project on the Jornada Experimental Range near Las Cruces, New Mexico. We have digitized and visualized over 7,000 images of basal vegetation growth dated from 1915.

The state of the art technology employed by the CIESIN/PSL partnership is a dramatic step forward in providing researchers and policy makers with rapid access to massive amounts of long-term data, and the ability to rapidly visualize changes in our land resources. I would like to share with you a "snapshot" example of the "before" and "after" to illustrate the concept.

Over the years, scientists have spent hours tediously documenting, by hand, the status of vegetation on sections of the Jornada Range. These time series data comprise over 80 years of previous government investment. Documentation in the form of yellowed and decaying graph paper (a xeroxed copy is shown in Exhibit A) were stored in cardboard boxes, not in a format useful for analysis of changing land conditions over time. As a result of our project, these boxes of graph paper were transformed to computer accessible visualizations that now look like this (Exhibit B).

Scientists can now see the years click by at the top of their computer, accompanied by corresponding visual images of the changing vegetation conditions on the screen. Policy makers can draw implications for land management needs. This prototype can be replicated by ARS in any state with land management questions.

This year, CIESIN is continuing to work in partnership with New Mexico State to complete the Bluewater Creek watershed data rescue project in Northwestern New Mexico. This will involve digitizing hard copy data, integrating these data with existing digital data and developing tools to make it easier for scientists and researchers at both the Cibola National Forest and the Mount Taylor Ranger District to use the data.

We are also working with PSL, the Agricultural Research Service, the Forest Service, the academic community, Agricultural Experiment Stations, and the Extension Service to begin a third data rescue pilot project on the Santa Rita Experimental Range near Tucson, Arizona. We will be digitizing range photographs dating back to 1903 for integration with weather data, plant species composition change data, and land treatment information to gain a comprehensive picture of changes in the landscape.

In FY 1996, we have also been able to more fully develop the Active Response Geographic Information System (AR/GIS), which is at the cutting edge of geographic information system technology internationally. Geographic information systems incorporate complex databases and models with computer maps to enable policy makers and citizens to easily visualize the impact of alternative uses of natural resources and to reach consensus. Our technology is unique in that it makes it possible to incorporate public input into controversial decisions about our precious land and forest resources. Under the current USDA/CIESIN project, we have been able to help the Arapaho and Roosevelt National Forests in Colorado use AR/GIS to incorporate public input into their Five Year Plan.

An Arapaho/Roosevelt forest planner noted: "AR/GIS allows people to explore available data surrounding the issue. It allows them to learn about the scope of the problem, explore alternative solutions and gain an appreciation for the perspective of others. I think AR/GIS can strengthen buy-in to the final outcome of adaptive decisions because it allows everyone affected to actively participate in determining the best possible solution."

In a small spin-off activity, the City of Scottsdale, Arizona leveraged off our current project and asked CIESIN to develop a prototype that could be used in sustainable community development planning. We are proud that this USDA-funded new technology can be seen as useful for land resource decision making in the urban setting, as well as the rural and forest settings. To date, AR/GIS has been recognized twice by the Urban Regional Information Systems Association which awarded it the "best of show" award and the "most innovative project" award in successive years.

This year CIESIN has also continued its data documentation work, in order to provide the public with greater knowledge of the rich data resources of USDA. CIESIN has developed and updated metadata about global environmental change-related data sets across the major USDA research agencies and made this information accessible to USDA and other researchers through the World Wide Web. The USDA/CIESIN World Wide Web "home page" provides an integrated view of over 450 USDA global change data sets, 160 models, and 173 GIS applications with electronic connections to a full spectrum of information related to environmental change research topics. As well, through the efforts of this project, USDA researchers can now search electronically for information about agricultural databases all over the world.

A form has been made available on the World Wide Web to allow USDA scientists and researchers to document new models and GIS applications as they are developed. Special attention has been given to making the metadata consistent with other USDA information initiatives.

Mr. Chairman, in FY 1997, we hope to leverage our past experience and integrate the data rescue, decision support, and information system tasks into a rangelands information network covering several ARS regions in the West. The results of the project would be available for any farmer, rancher, or scientist that has access to the Internet.

Mr. Chairman, this project is an important part of the Agency's work in the area of agriculture and the environment, and brings to ARS advanced technical capabilities that they would not otherwise have in-house. It preserves and makes efficient use of previous government investment, provides state of the art tools for sound agriculture and natural resource decision making, and helps USDA more fully meet its obligations to make data and information more readily available and more useful for federal, state and local policy makers and taxpayers. We are grateful for the opportunity to provide Subcommittee members with an update on our activities.

COUNCIL FOR AGRICULTURAL RESEARCH, EXTENSION, AND TEACHING

PREPARED STATEMENT OF JOSEPH D. COFFEY, CHAIRMAN

Thank you Mr. Chairman. I am Joe Coffey, Vice President of Economics and Planning of Southern States Cooperative, Richmond, Virginia, a farmer-owned and controlled cooperative that serves 125,000 farm families and a million rural families in the six state area that surrounds this nation's capital. I am here testifying in my capacity as Chairman of the Council for Agricultural Research, Extension, and Teaching (CARET). CARET is a national grassroots organization created in 1982 by the National Association of State Universities and Land-Grant Colleges (NASULGC). CARET's mission is to enhance national support and understanding of the land-grant university food and agricultural research, extension, and teaching programs.

Specifically, I am here today to support the FY 1997 budget recommendations of the NASULGC Board on Agriculture of $879.6 million, an increase of 4.08% over FY 1996 funding of $845.1 million. This request is for federal funding for research, extension, higher education, and federal administration.

While this budget request of $879.6 million is a sizable sum, it is small compared to what it means to the American economy and the American consumer. As the distinguished members of this subcommittee know, U.S. agriculture is one of our best kept secrets. This year the 1.9 million U.S. farms will produce a record $200 billion of food and fiber. A record $58 billion will be exported. Agriculture encompasses much more than farming. Our entire food and fiber sector contributes some $950 billion annually to our U.S. economy and comprises 16% of total economic activity. The food and fiber sector generates 23 million jobs and employs 17% of the total work force.

While U.S. agriculture may be our best kept secret, our land-grant programs of research, extension, and teaching are unsung heroes. The triumph of agriculture has occurred during my lifetime. For decades, the yield of America's foremost crop, corn, was stagnant -- rising only 5 bushels from 1866 up until the 1930s. Then with the advent of hybridization, corn yields began to climb. From 1940 until today, corn yields have tripled -- rising almost 100 bushels per acre.

The unsung heroes behind this modern miracle are the federally-supported programs of agricultural research, extension, and teaching of the land-grant universities. This triumph of modern agriculture did not line the pockets of the American farmer. Indeed, net farm income today.

measured in inflation-adjusted dollars. is less than it was in the 1940s, 1950s, 1960s, or 1970s. While science-based technology has reduced the drudgery and elevated the productivity of the American farm family. the income of farm families now is barely above the average for all families.

No, these programs of research, extension, and higher education did not line the pockets of farmers. They filled the stomachs and reduced the costs of the consumers. We are the best fed people in the history of the planet. We spend only 10% of our income on food. Each year, U. S. consumers save $200 billion because they pay 40% times less for food and fiber than they would had this triumph of agricultural technology not occurred. Let me repeat that statistic. The advances of agriculture research, extension, and teaching save consumer $200 billion annually, or over $200 for each dollar in our budget request. Not a bad deal!

The members of CARET, and the thousands of people back home who share our views, do not want these unsung contributions of our land-grant colleges to be short-changed. That is why we appreciate this opportunity to bring our message to Congress.

Some may say we do not need these publicly-supported programs any longer, that they can be handled by the private sector. Mr. Chairman, it is true that more than half of agricultural research comes from the private sector. However, most of the private research is built upon the foundation of basic research created by our land-grant colleges. And, as a bottom line necessity, private research tends to have a shorter term and a more narrow focus. Publicly-supported research and education, in contrast, can have a longer and broader horizon. Our colleges of agriculture are a leading source of information and an unequaled source of trained and educated human capital so necessary to deal with the increasingly complex and controversial challenges of land use, waste disposal, soil and environmental quality, food and safety, and animal welfare.

The land-grant university is a unique partnership working with and for people, food, agriculture and the environment. The land-grant universities, who work in close cooperation with the USDA, employ more than 24,000 professionals who serve more than 40 million Americans annually through the Cooperative Extension Service, educate more than 100,000 students on our campuses and conduct thousands of research projects on agriculture, human development, and natural resources. Participating universities include the traditional 1862 institutions, the historically Black 1890 institutions, and the Native American-controlled colleges that were recently designated as 1994 land-grant institutions.

Mr. Chairman, while our budget request for FY 1997 contains an impressive array of 64 separate line items, I want to emphasize that this is an integrated package consisting of 3 integrated and inter-related programs: research, extension and teaching. I'm sure if you have had the opportunity to travel the globe, talk to farmers and visit agricultural colleges, you will have been convinced of the superiority of our land-grant system. Our success springs from the synergy of the close working relationships of research, extension, and teaching programs -- all of which are vital to the success of our American agriculture.

I also want to emphasize that this array of line items is not just a patchwork of programs shoehorned into an appropriations package. This 1997 budget request is based upon a planned program of work that has involved not only the scientists and academicians, but thousands of farmers. consumer groups, and business people such as myself. Members of CARET participated in the entire sequence of planning and priority setting which began at the local county level and culminates in this budget request. Members of CARET and other community leaders serve on literally thousands of local. state, regional, and national groups who are involved in the development and direction of this request.

These carefully planned programs are held accountable by a thorough evaluation process. There have been dozens of studies of return to public investments in agriculture research, extension and teaching, these have consistently and convincingly documented a high payoff of a 25% annual return or more. As we speak today, there are some 22 separate studies underway evaluating the agricultural programs of the land-grant colleges. Frankly, I believe we should spend less time peppering these programs with inquests and start supporting them more with appropriations.

But let me ensure you that we do not have anything to hide. Indeed, we have hundreds of success stories that document how these programs have benefited lives and livelihoods. Permit me to cite just a few examples.

- *Scientists in Mississippi have developed new timber harvesting systems that allow unmarketable tree parts to be used to make fuel at prices that compete favorably with alternative fuels. The harvesting systems also saved approximately $100 per acre in site-preparation costs.*

- *University extension pesticide education and applicator training programs have led to a 38% reduction in pesticides used on Midwest soybeans, corn, wheat, and milo in the last 15 years; Midwest farmers are lowering production costs $2.18 to $4.35 per acre by using lower levels of insecticides.*

- *In 1994, 2,135 growers used reduced-rate technology developed by University of Arkansas researchers and extension specialists on 831,000 acres. This amounted to a savings of $7 in herbicide costs per acre relating to a statewide savings of almost $6 million.*

- *Musk thistle numbers have been reduced by almost 90 percent with two kinds of thistle-eating weevils resulting in one 12-county area in Missouri saving the highway department $73,000 per year in thistle control.*

- *Food-handling methods improved as much as 85% among people who received university-based training in proper food handling techniques in states like Washington, Nebraska, Indiana, Pennsylvania, Maryland, Kansas, Kentucky, Delaware, Connecticut, Colorado, Florida, and New Mexico.*

- *The Pennsylvania Extension Service is teaching good farmers how to be good business managers, increasing an average 60-cow dairy operations annual profits by as much as $5,040.*

- *A volunteer immunization clinic in Beatrice, Nebraska, operated by a certified nurse and extension volunteers, gave children 3,128 immunizations worth $88,000 last year. Studies have shown that universal vaccination with HIB at 18 months would save $207 million in health care costs.*

- *Five pounds of shredded newspaper and one bushel of soybeans make 2 board feet of Environ, a material developed at the Ohio State University that looks like granite and can be used like fabricated or natural wood. it can be used for tile, counter tops, flash boards, and more.*

- *Neonatal mortality cut in half: The Have a Healthy Baby program, started in Indiana, is now in 33 states and provides pregnant teens with nutrition education before and after birthing. The program is credited with reducing deaths per 1,000 births from 5.7 to 2.8. Days of hospitalization ($2,000 per day) for low-birth weight infants were reduced from 30 days to 13 days.*

- *Cornell University conducted rural water quality education clinics enabling participants to make decisions about treating water (67% after the clinic compared to 30% before), choosing among alternative treatments (50% after the clinic compared to 12% before), and maintaining a well after the clinic (59% after clinic compared to 38% before).*

Mr. Chairman, the number one priority of our request is the funding of the base programs, which account for $537.8 million or 61% of the request. These base programs of federal formula funds are block grants which are matched by the states and localities. Each dollar of federal funding leverages $4-5 of funding from state, local, and private sources. But much of this state and local funding, and almost all of the industry grants and contracts are directed to specific projects and programs, which can only be productive if built upon a strong base of support. These crucial base programs, which leverage support from the state, localities, and industry and provide a strong base for further activity, are absolutely and unequivocally of highest priority.

Our budget also calls for an increase in funding of the competitive grant programs and special initiatives. I realize that these competitive grants and special initiatives may have more sizzle, but the base programs are the real steak. Most overlook these base programs that undergird all that is built on top. When we come to this capitol, we do not notice the foundation but marvel at the dome. But that dome would jeopardized were it not for the solid foundation. So it is with the base programs of the land-grant colleges.

The agriculture research, extension, and teaching programs are being weakened by budget reductions and inflation. In real inflation-adjusted dollars, the federal support of these programs has been cut by 15% in the past four years and are less now than they were 15 years ago. We need to reverse this downward spiral of federal support. Our request this year for a 4.08% increase, just barely offsets inflation, and does very little to rebuild the programs that have been reduced. We are mindful of the very tight fiscal situation and have been very conservative in our funding request.

Mr. Chairman, let me conclude my presentation with the reasons why CARET and thousands of people across the country urge this Subcommittee and this Congress to approve the NASULGC Board on Agricultures 1997 budget request: U.S. agriculture is entering a global, high-technology, environmentally-sensitive era. Despite the past successes, education, research, and extension are needed more today than ever before in order to keep American agriculture competitive on the global market and environmentally sound at home. The benefits of these federally-funded programs reach far beyond the farm gate. They benefit the pocketbook, and they comfort every American consumer. They create jobs. They generate foreign exchange earnings. They find solutions to society's economic, social, and environmental problems.

I am confident that CARET can count on your continued support. I ensure you that CARET will continue to champion this important cause.

DEFENDERS OF WILDLIFE

PREPARED STATEMENT OF JOHN D. PERRINE

On behalf of our more than 137,000 members and supporters nationwide, Defenders of Wildlife thanks you for the opportunity to submit testimony on the 1997 appropriations for the Department of Agriculture.

Defenders is primarily concerned with problems associated with the Animal Damage Control Program (ADC), for which we are urging funding cuts and restrictions on their environmentally damaging activities. These changes are necessary to increase ADC's public accountability and decrease its impact upon wildlife and the environment. We also support full funding for the Conservation Title of the 1996 Farm Bill.

In summary, Defenders of Wildlife is requesting this Subcommittee to take the following specific actions on the 1997 appropriations for the Department of Agriculture: 1) Require more detail in the program's annual funding requests; 2) Limit monies spent on livestock protection and instead direct funds toward programs to protect human health and safety and natural resources; 3) Limit ADC's use of federal funds to verified problems; 4) Limit and report ADC's use of lethal controls; 5) Increase opportunities for public involvement in ADC's activities; 6) Collect matching funds from all recipients of ADC services; and 7) Maintain $1.9 billion for the Conservation Reserve Program, $188 million for the Wetlands Reserve Program, and related conservation initiatives in the 1996 Farm Bill.

Defenders is concerned about the harm done to wildlife, endangered species and natural habitats by the Animal Damage Control Program (ADC) of the USDA's Animal and Plant Health Inspection Service (APHIS). Established by Congress in 1931, the ADC program is assigned the task of "eradication, suppression, and bringing under control" of predators and other animals deemed injurious to agriculture and other human activities. Defenders has worked since the 1960s to minimize the adverse environmental impacts of various ADC activities. For example, we have long opposed ADC's use of environmentally damaging toxins and promoted the use of guard animals and other non-lethal methods of predator control. Defenders is also a member of the National ADC Advisory Committee and, through our Wolf Compensation Fund, we work closely with ADC to resolve livestock conflicts in states with recovering wolf populations.

Although progress has been made toward solving some of ADC's problems, many remain unresolved. We have voiced our concerns to ADC Deputy Director Bobby Acord and Agriculture Secretary Daniel Glickman but have yet to receive any indication of serious effort to reform ADC. Accordingly, we are bringing these matters to the attention of Agriculture Appropriations Subcommittee with the request that you take the following actions when allocating funds for FY 1997:

1) Specify Major Categories of ADC Expenditures: In all future appropriations requests, the single line item for ADC Operations should be broken down into the seven primary categories of resources protected by ADC.

For FY 1997, the Administration requests $26,642,000 for ADC Program Operations. This single line item includes dozens of programs in all 50 states and several foreign countries to protect seven categories of resources (e.g., livestock, property, crops, human health and safety, forests and rangelands, natural resources, and aquaculture). Effective Congressional oversight and public monitoring of ADC activities is not possible without further detail as to how ADC intends to distribute its federally-appropriated funds within these categories.

2) Limit Monies Spent on Livestock Protection: Defenders recommends that no more than 25% of ADC's federally-appropriated funds be directed toward livestock protection, and that ADC instead emphasize programs protecting human health and safety, natural resources, and healthy wildlife populations.

Defenders considers it excessive for ADC to spend more on livestock protection than all other programs combined. This multi-million dollar subsidy to western sheep and cattle producers provides little real benefit to the American public or the livestock industry as a whole. Predation accounts for less than 3% of cattle losses nationwide, far less than losses due to respiratory problems, digestive problems, calving complications, weather, poison, or theft. While sheep producers are harder hit by predators than cattle, the American sheep industry has been in a steady decline for decades for many reasons other than predators, including increased use of synthetic fibers, decreased consumption of lamb and mutton, rising labor costs, drought, and competition with foreign producers.

Furthermore, there is considerable evidence that the substantial monies being spent by ADC to reduce livestock losses are not producing the intended result. For example, between 1983 to 1993, livestock losses to predators rose despite a 30 percent increase in the number of coyotes killed annually and a 71 percent increase in ADC's inflation-adjusted appropriations. Coyotes, ADC's chief target, respond to intensive killing by producing larger litters and rapidly immigrating from neighboring areas, so ADC activities can actually lead to increased populations of coyotes. Just like the recently-repealed National Wool Act, government-subsidized predator killing for sheep ranchers represents a poor investment of taxpayer funds, and hardly warrants ADC's current level of expenditures.

Rather than continuing this wasteful and ineffective subsidy, Congress should direct ADC to shift its activities to programs that actually benefit taxpayers by protecting human health and safety, natural resources, and healthy wildlife populations. In Guam, for example, ADC is appropriately averting an ecological disaster by preventing the spread of the exotic brown tree snake. Similar programs should be established domestically to repel other invading exotic species such as the nutria and zebra mussel.

3) Limit Use of Federal Funds to Verified Problems: To reduce the killing of non-target animals, Congress should restrict ADC's use of federal funds for livestock protection to controls which target only individual problem animals responsible for confirmed damages.

ADC's excessive use of indiscriminate lethal controls, such as traps, snares, and M-44 cyanide devices, results in the death of thousands of non-target animals annually, occasionally including members of rare and protected species. In addition, ADC personnel frequently initiate these controls without first verifying the actual scope and extent of the damage which has occurred. The above restriction will increase the efficiency of the ADC program and reduce its impacts on non-target wildlife.

4) Limit and Report on Lethal Controls: ADC should be required to present annual reports to Congress explaining the program's use of lethal controls. Such reports should document the use of enforceable standards requiring ADC personnel to use non-lethal alternatives prior to the initiation of lethal controls. The reports should also provide a detailed account of ADC's preventative killing operations, including the expenses and number of wildlife killed in these operations.

Defenders opposes ADC's over-reliance upon lethal controls to solve human/wildlife conflicts, especially those involving predators. In 1994 alone, ADC personnel killed approximately 100,000 predators, including 85,571 coyotes, 8,973 foxes, 1,928 bobcats, 293 mountain lions, and 163 black bears. While Defenders recognizes the need to control individual problem animals causing unreasonable damages or threat to human health, property, and welfare, we do not believe the interests of the American taxpayer are best served by the wholesale killing of wildlife.

We believe ADC field personnel routinely kill wildlife before giving sufficient consideration to non-lethal alternatives. This is a clear violation of prior Congressional directives, ADC policy, and the National Environmental Policy Act (NEPA). A 1995 investigation by the General Accounting Office found that ADC personnel "used lethal methods in essentially all instances to control livestock predators." ADC should be required to specify and enforce their policy concerning the use of non-lethal controls. This can only be done by developing of enforceable standards stating how non-lethal controls will be used before resorting to lethal methods. This Subcommittee should also reaffirm the earlier Congressional directive for ADC to use nonlethal controls whenever possible, including the control of predators.

On a related issue, Defenders opposes ADC's practice of killing predators in anticipation of possible future livestock losses. ADC has no formal policy concerning these "preventative" controls, does not document the number of animals killed in this fashion, and has presented no evidence that such preventative controls are necessary to reduce livestock losses. Annual reports to Congress are necessary to ensure that the use of lethal preventative controls is kept to an absolute minimum.

5) Increase Opportunities for Public Involvement: Congress should require ADC to solicit and consider public comments at all stages in documents prepared pursuant to NEPA. We request this Subcommittee to restore full funding for the National ADC Advisory Committee, and to allocate or direct sufficient funds for APHIS for an additional Full Time Equivalent (FTE) employee to fulfill public information requests about ADC.

These measures are essential to ensure public input on ADC activities. Using taxpayer funds to kill wildlife is always controversial and both common sense and the law dictate that any federal agency considering such actions should vigorously solicit the public's input before initiating any control measures. Defenders is concerned that the public is not receiving adequate opportunity to comment on the state and regional Environmental Assessments (EAs) ADC is now preparing as a follow-up to the agency's 1994 Programmatic Environmental Impact Statement.

For example, in New Mexico, citizens who had expressly requested to be informed of ADC activities were never notified of a plan to kill predators in portions of the Gila National Forest until it was too late for them to comment. Instead, the sole request for public comment was a brief notice in a Catron County newspaper. As a result, most New Mexicans were unaware of ADC's plan, despite the fact that ADC would be killing wildlife, a public resource, on publicly-managed lands.

To prevent such abuse of the public trust in the future, ADC should solicit and consider public input at all stages of plan development, including scoping and review of draft and final plans. Public comment periods should extend for a minimum of 30 days to allow all interested parties to comment, and solicitation should include notices in the Federal Register announcing the preparation of EAs for activities on public lands.

The National ADC Advisory Committee (NADCAC), composed of 17 representatives of various interests affected by ADC, including livestock producers and wildlife conservation organizations such as Defenders, provides valuable input and oversight to the ADC program. Recent Congressional budget cuts, however, have reduced the NADCAC's budget by 30 percent, hindering the committee's ability to meet in a timely and effective manner. Defenders requests the Subcommittee to direct $8000 to restore the funding for this valuable committee to its previous amount.

Defenders is concerned that requests for information on the ADC program filed pursuant to the Freedom of Information Act (FOIA) are routinely delayed for months, due to insufficient staff resources for APHIS. This delay perpetuates the image that ADC is unwilling to release information about the details of their activities. Allocation of funds for a single additional FTE APHIS staff to handle such requests would greatly ease this problem and facilitate access to public information.

6) Encourage ADC to Collect Higher Fees: Matching funds should be required from the recipients of ADC's services. Equitable cost sharing ensures the most efficient use of taxpayer funds. Although ADC is authorized to collect fees to distribute the program's costs equitably among the recipients of its services, in many states, these fees recover less than half of the program's expenses. If fair cost-sharing were to be required consistently for livestock protection and other ADC programs, this would serve to self-limit unnecessary or marginally effective actions. Only when livestock losses are significant and verifiable would the livestock producers be willing to pay for such services. The net result would be both fiscal savings and environmental benefit.

7) Maintain Full Funding for the 1996 Farm Bill's Conservation Title: Defenders supports the Administration's request for $1.9 billion for the Conservation Reserve Program (CRP), $188 million to fund the Wetlands Reserve Program (WRP), and $658 million for the Natural Resources Conservation Service staffing line item. These programs have won bipartisan support because they are needed to protect our natural resources while ensuring future sustainability of our agricultural production.

On behalf of Defenders of Wildlife, I thank you again for this opportunity to submit testimony.

1890 LAND-GRANT COLLEGES AND UNIVERSITIES

PREPARED STATEMENT OF DR. SAMUEL L. DONALD, REGIONAL RESEARCH DIRECTOR

Senator Thad Cochran, Chairman, and other distinguished members of the Committee, my name is Samuel L. Donald, Regional Research Director for the seventeen Historically Black 1890 Land-Grant Colleges and Universities, including Tuskegee University (hereafter referred to as the 1890s). Mr. Chairman, I submit, on behalf of the 1890 community, this written testimony in support of the FY 1997 Budget recommendations for the 1890s.

GENERAL INFORMATION

Mr. Chairman, today, the rich legacy of the land-grant tradition remains prominent on the campuses of the 1890s. These institutions are increasingly serving as economic instruments of the state and the nation. They have their extraordinary influence on the lives of all citizens including African Americans and other minority groups. While enduring inequities in state and federal funding, the 1890s serve as exemplary role models; provide educational access to those who may otherwise be denied the opportunity to pursue a college education; and foster an unyielding commitment to academic excellence, social equality and the assurance of a decent future for all students including those from the lowest economic strata of the nation. These universities have been in the forefront of educating youth-at-risk, producing research vital to the quality of life and the environment, and addressing the social and economic needs of urban and rural communities. Teaching, research and extension remain prominent on the campuses of the 1890s.

ACCOMPLISHMENTS AND IMPACTS

Historically Public Black Colleges and Universities (HPBCUs) constitute some of the largest and most prestigious institutions of higher education in the nation. Among them, two of the largest are 1890 HPBCUs. Eight 1890s offer Ph.Ds. and/or professional degrees in engineering, food science, toxicology, environmental science, and other areas of national need. Three of the top five HPBCUs in the nation contributing to the production of African American doctorates are 1890s. Annually, six HPBCUs produce nearly 20 percent of all African American bachelor degree recipients in engineering and the 1890s graduate over 80 percent of all Black recipients of bachelor degrees in agricultural sciences. Tuskegee University alone has trained more than 80 percent of the nation's Black veterinarians.

The 1890s depend heavily on federal support for sustaining their academic, research, and extension programs. These institutions contributions to science and other accomplishments are reasons for maintaining and expanding the federal partnership. For the purposes of improved food quality and food safety, improved and sustained agriculture production, improved quality of life for rural people, etc., some of the more recent accomplishments of the 1890s are:

- Tested water samples from wells of rural families for nitrates and pesticides residues.
- Determined soil loss coefficients for fruits and vegetables.
- Developed new invitro systems for enhancing root system development of pine and hardwood trees.
- Found that increased production of rapeseed will provide an efficient domestic source of erucic acid oil, reduce expensive imports of rapeseed oil, help control environmental pollution resulting from use of inorganic pesticides, and assist in the development of sustainable crop production.
- Found that N-methyl aspartate enhanced growth and reduced fat in swine and chickens.
- Demonstrated that gamma irradiation of broilers eliminated 99% of microbial contamination.
- Found that self-rating by 9-12 grade students in 19 rural schools mirrored the reward systems in the schools.
- Developed Simmental cattle with a high rate of twinning.
- Determined that lambs and kids produced on cowpeas are lean and low in fat and preferred by consumers.
- Developed a simplified field test for water engineers and seafood producers and processors of two major flavor contaminants.
- Developed a new vegetable-legume cropping system for small-scale farmers in the Southeast.
- Established seed and tissue culture systems to grow peanut and sweet potato invitro.
- Developed a screening system to detect aflatoxins in peanut.
- Developed a database that provides information used by the swine industry, agencies and educational institutions.
- Demonstrated a direct relationship between diet and exercise on hypertension and diabetic African American women.
- Determine that dietary omega-3 polyunsaturated fats have beneficial properties to change physical and biochemical processes to control blood pressure.
- Developed technology to improve goat meat and fiber production.
- Developed intensified "Farm Planning Program" for farmers to improve profitability from crops, livestock, and alternative farm enterprises.
- Assisted fish farmers to develop viable aquaculture operations.
- Conducted senior citizens conferences on consumer fraud, security, energy conservation, and modification of dwellings for handicapped use and access.

- Successfully worked with low-income rural communities to apply for the USDA Enterprise Community designation, resulting in one community being so designated and awarded $3 million and several others designated as "Champion Communities."

The above accomplishments had major impacts on improving (a) the quality of lives of people served and (b) the entrepreneurial skills and farming operations of farmers served.

BUDGET RECOMMENDATIONS

The 1890s support the FY 1997 budget recommendations of the National Association of State Universities and Land-Grant Colleges (NASULGC) which emphasizes modest increased funding for the research, extension, and academic programs. Mr. Chairman, the 1890s urge the Committee to strongly support the NASULGC recommendations which includes the following for the 1890s:

Evans-Allen Research Program ($28.927 Million)

The 1890s request a marginal increase in base funds for research. These funds will enhance the capacity of these institutions to become more competitive in the private sector and in domestic and international research endeavors designed to undergird the vitality of the nation's agricultural enterprise. This support will enhance the ability of the 1890s to compete for grants and contracts in a wider variety of programs in the U.S. Department of Agriculture, other federal agencies, and the private sector.

Capacity Building Grants Program ($10 Million)

The Capacity Building Grants Program is making a major difference in the quality and quantity of teaching and research programs in food and agricultural sciences and technology on the campuses of the 1890s. Since the creation of this enormously important program, the 1890 leadership has strongly advocated a substantial and sustained increase in funding at more than $25 million annually. This level of funding would allow these institutions to significantly improve the range and level of academic programs offered, enhance the performance and productivity of faculty in the sciences and increase research opportunities for undergraduate and graduate students. However, consistent with the NASULGC's recommendation, the 1890s support the request of $10 million.

Extension and Research Facilities Grants Program ($7.782 Million)

The 1890s unequivocally support the $7.782 million facilities funding request in the FY 1997 budget for renovation, maintenance and overall improvement of the infrastructure on our campuses. The 1890s face nearly insurmountable barriers in attracting public and private support for enhancement of facilities. Although this level of funding will not fully address the critical facility needs of our institutions, it will complement existing efforts to make major improvements. The 1890s are especially concerned about the lack of funding for the enhancement of instructional facilities.

Extension Program ($26.168 Million)

The 1890s support a modest increase in base funding requested by NASULGC for extension activities over the FY 1996 appropriation. This marginal increase will allow our institutions to sustain program activity at current levels and respond more efficiently to the growing demand for services in severely depressed communities.

Rural Economic and Social Development ($1 Million)

The 1890s support NASULGC's recommendation of $1 million for rural economic and social development The opportunity for these institutions to create new models and solutions for transforming the competitive environment of poor communities is increasingly important, given the state of rural America. The social and economic conditions of the communities the 1890s traditionally serve are compounded by the fact that these institutions are located in some of the most economically depressed areas with the lowest per capita incomes in the nation. In a national study on infant mortality, infant morbidity, housing, health care, education, violence, poverty, and other at-risk factors, states with the 1890s are clustered among the lowest ranked in the nation. This support will offer a marginal opportunity to better address social and economic dependence.

1890 Institutions Centennial Centers of Excellence ($1 Million)

The 1890s recommend, with NASULGC support, consideration of $1 million to establish five National Centennial Centers of Excellence. The establishment of these centers will facilitate the development of areas of specialization and expertise that are consistent with research priorities identified by the U.S. Department of Agriculture as well as the agricultural enterprise in general. The five proposed centers are:

- National Center for Goat Research and Training;
- National Center for Agricultural Engineering Development, Research, and Training;
- National Center for Water Quality and Agricultural Production, Research, and Training;
- National Center for Sustainable Agriculture Research and Training; and
- National Center for Domestic and International Trade and Development, Research, and Training.

CLOSING COMMENTS

Mr. Chairman, based on past accomplishments and visionary approach, the 1890s are positioning themselves to enter the 21st Century with a renewed commitment and capacity to implement their land-grant mission of teaching, research and extension. Full appropriations of the FY 1997 budget recommendations as stated above will facilitate this and is vital to the 1890 Land-Grant Colleges and Universities. If there is a need for additional information, you may contact me or President Holloway as indicated below.

Dr. Ernest L. Holloway
President of Langston University, and
Chairman of the Council of 1890
Presidents and Chancellors
Langston, OK 73050
(405)466-3202 (Telephone)
(405)466-3461 (FAX)

Dr. Samuel L. Donald
Regional Research Director
1890 Land-Grant Colleges and Universities
Room 1103, Early Childhood Research Center
University of Maryland Eastern Shore
Princess Anne, MD 21853
(410)651-6074 (Telephone)
(410)651-7657 (FAX)

PREPARED STATEMENT OF THE FDA COUNCIL

Introduction

The FDA Council is a coalition of patient advocates, academic scientists, health professionals, and research-based industry organizations. These allies have come together to increase the visibility of the complex challenges the Food and Drug Administration (FDA) faces. The Council appreciates the opportunity to submit testimony concerning the importance of funding for the FDA. Over the past five years, this Committee has been vitally important in addressing funding priorities the FDA has faced and we are grateful for your support of the agency.

The promise and potential of our research and innovation enterprise is full of wonder and heartache. WONDER because we have established a strong base of support for basic research, funded by the government and the private sector. This research enterprise has positioned the United States as the world leader in medical research and innovation. We have within our reach the knowledge to effectively pursue and eventually eradicate through medical research many of the killers and cripplers that have plagued mankind. HEARTACHE because the solutions for many of the most devastating, costly, and chronic diseases will not be realized in time to prevent the premature destruction and death they cause for many. We are in a race against the clock when it comes to cancer, heart disease, Alzheimer's, cystic fibrosis, A-T, and many other catastrophic diseases.

The FDA is the last step in realizing the wonder of medical research and innovation, as it is the FDA which is the arbiter of translating progress from the laboratory bench to the consumer. The FDA, the research-based pharmaceutical industry, patients and their advocates, researchers and health providers share a common goal: to get safe and effective medicines to patients as quickly as possible.

Congress holds the key to realize this vision by virtue of the mandates it places on and the resources it provides to the agency. In addition, the FDA must have the support and leadership of Congress to effectively address the regulatory paradigm in which the complex and sophisticated drug development process is undertaken.

The Council recognizes that there is considerable interest in reform of the FDA. We also believe Congress will act in a way that will support a more effective FDA as an important regulatory mission of government through the authorization process. We believe that there are important priorities which need to be addressed in FDA reform. While reform is being considered and moved through the legislative process, we cannot diminish efforts of the past several years which have improved the effectiveness of the agency by failing to provide the resources necessary to carry out its current mandates. Patients are the main beneficiaries of an efficient FDA, and we must insure that the agency operates effectively as Administrative and Congressional reforms of the agency occur.

Budget Request

The FDA Council recommends an appropriated funding level of $1,024 million for the FY 1997 FDA program level, a $43 million increase above 1996. While this level of funding is the same as the Administration's Budget Request, we believe that the full sum should be appropriated. We oppose the unauthorized user fees proposed by the Administration and recommend that the $24 million in unauthorized medical device user fees and the $15 million in unauthorized import inspection user fees be provided in budget authority. Any user fee program should be authorized prior to implementation. We believe that the initiatives proposed by the Administration should undergo the same Congressional consideration that was provided to the Prescription Drug User Fee program.

Representing the industry regulated by the FDA, the consumers that benefit from FDA's responsibilities in product approval and public health protection, and the health professionals who depend upon the FDA to approve treatment options, we offer the following rationale for our budget recommendation.

* The FDA regulates 25 cents out of every dollar that consumers spend--one quarter of our economy. The agency needs the resources to address this regulatory responsibility and the growing number of new technologies under development. The FDA must have the tools, resources and trained personnel necessary to work with and regulate a highly sophisticated industry.

* The clock is ticking for many Americans afflicted with catastrophic and devastating diseases. The average time to move a product from the bench to the bedside in the 1970's was

5-7 years. Today, the average time is 10-12 years. The cost of developing a new drug in that same time frame has risen from $70 million to over $359 million in the 1980's. It is estimated that the cost of drug development will increase in the 1990's to over $500 million. This extended development time impacts the availability of therapies for patients and drives up the price of the end product. The FDA has made **dramatic** changes over the past several years to address this situation. A few examples.

- In 1987 it took an average of 33 months for NDAs submitted to be approved. This time line has been improved to 19 months.
- 96% of new drug and biologic applications were reviewed "on time" as defined by agency action within 12 months, and if a major amendment is submitted by the manufacturer late in the process, an additional three months is granted.
- Initiatives to address the review and regulation of cancer therapies which were just announced by the Administration at the beginning of April will make a significant difference in the handling of promising new therapies for cancer patients.
- In cystic fibrosis, the CF community worked closely with the FDA and Genentech to bring Pulmozyme from the test tube to the marketplace in four years. Now being used in over 9,000 patients, this drug is a testimony to the commitment of the agency and the effective role that user fees has played in the drug approval process.
- Further, the CF community is working cooperatively with the gene therapy group of the FDA in expediting the development of gene therapy which is now being evaluated in 90 CF patients. The FDA must have resources to continue this close collaboration on cutting edge technologies for patients with cystic fibrosis. From the CF community's perspective, gene therapy would not be where it is today if it were not for the commitment of the FDA staff and the Congress in providing the resources for the FDA to meet this challenge.

We rely on you, the Congress, to insure that the continued progress by the FDA in these areas does not come at the expense of other worthwhile programs and that they have the resources to carry out the breadth of their statutory responsibilities. The lives of many Americans depend upon the FDA. It is vital that the FDA have the resources needed to meet its mandate and to speed the process of approval of new medical technologies.

The FDA Council understands the severe budget constraints which exist presently, but it also believes that **the functions of the agency are too vital to consider appropriating any less. Health must be one of our Nation's top priorities, for a wealthy and economically sound country is predicated on the health and well being of its citizens.**

Thank you for the opportunity to submit this statement to the Subcommittee. We appreciate your support of this agency and look forward to working with you in the coming months.

The members of the FDA Council are: the A-T's Children Project, Candlelighters of Childhood Cancer Foundation, Allergy and Asthma Network - Mothers of Asthmatics, Inc., Alliance for Aging

Research, American Medical Association, Merck & Co., Inc, American Academy of Allergy and Immunology, Pfizer, Inc., American Veterinary Medical Association, Joint Council of Allergy and Immunology, Hoffman-LaRoche Inc. American Society of Tropical Medicine and Hygiene, National Multiple Sclerosis Society, Monsanto Company, Arthritis Foundation, Glaxo Wellcome, Inc., American Social Health Association, Cystic Fibrosis Foundation, Bristol-Myers Squibb Company, American Association for Cancer Research, National Depressive and Manic-Depressive Association, Society of Toxicology, and the Autism Society of America.

FLORIDA STATE UNIVERSITY

PREPARED STATEMENT OF RAYMOND E. BYE, JR., ASSOCIATE VICE PRESIDENT FOR RESEARCH

I would appreciate the opportunity to acquaint you with two Florida State University (FSU) initiatives for which we seek federal support. The first project is a telecommunications initiative; the second project involves climatic forecasting and prediction research aimed at mitigating the devastating effects of El Nino.

Telecommunications

As you may know, Florida State University is located in the Florida State Capitol of Tallahassee. The university has approximately 30,000 students, with more than two-thirds of those being undergraduates. FSU has campuses in Panama City, Florida, and in several other sites throughout the State.

FSU proposes to develop a telecommunications network that will connect our Tallahassee-based campus and our state facilities with rural communities in northwest Florida to provide educational and informational services. That region of the state is predominantly agricultural, and would be an ideal target for innovative applications of these communication technologies.

Public libraries and public schools will be employed in reaching this underrepresented and underserved population, providing a cost-effective and replicable approach to enhancing educational opportunities and increasing access to information. The demonstration project encompasses the utilization of new and existing telecommunications technologies in order to create a communications network linking substantial portions of the Panhandle region of northwest Florida.

With Florida State University as the hub and as the technical resource, this distance learning project would also allow for the implementation of an agricultural information network providing predictive crop-related information to farmers and other key agricultural interests and officials in northwest Florida, with future plans to expand into the southeast region of the United States. Working with public schools and public libraries, Florida State University will explore both hard-wired and wireless modes of communications to convey a wide array of agricultural, educational, and resource materials to numerous groups and audiences.

Industrial/business partners are involved in our planning and have agreed to provide substantial matching resources. Among our corporate partners in this area of distance learning are IBM Corporation, Silicone Graphics Incorporated (SGI) and MCI. Additional partners will be involved in this telecommunications effort as we progress, including state agencies in both the agricultural, educational, and emergency management arenas.

Mr. Chairman, this project provides the potential to expand access to educational and crop-related opportunities in areas that would otherwise remain inaccessible without this innovative telecommunications effort. We are confident that we have the technical resource, the partners, and the capability to successfully undertake this distance learning demonstration project.

We are seeking $700,000 in federal funding to support this endeavor, and are confident of commitments from our public and private partners that will match this federal support. We thank the Subcommittee for the support it has given to Florida State University in the past, and we hope that you will find this proposal merits federal funds.

International Research Institute (IRI) Application Efforts by the Florida Consortium

A Consortium of Florida research universities, led by Florida State University, and including the University of Florida, the University of South Florida, and the University of Miami, seeks federal support to proceed with the development of national forecast adaptations and applications -- with a particular emphasis on the southeastern region of the country -- to understand and predict climate variations caused by the El Nino weather phenomena. This ability, if applied and utilized, could have major economic benefits to farmers, local business and industry, and private citizens by reducing damage or losses associated with these natural disasters. Within the United States, most of the damage and loss suffered from the El Nino effect is in the southeast. In agricultural areas alone, studies have found that there is more that $100 million annually in mitigable damage in our southeastern region.

Federal funding would allow two major thrusts to be taken in this research area. First the research component of the activity, centered at Florida State University and assisted by the University of South Florida would provide additional needed computing time for model development and improvement. This would relate to both the El Nino effect (which is the warm phase) and upon El Viejo (which is the cold phase); the latter is much less understood scientifically. As improved predictive capabilities and the application of that information are employed, substantial damage that results as an outgrowth of these warming/cooling cycles can be predicted in mitigated.

The second component of the Consortium's research effort is the development and application of the overall risk assessment and risk management framework that would take the data, simplify it, and provide training for its utilization among policymakers in areas heavily impacted by El Nino. This focus would be on minimizing or negating agricultural damage or loss as a result of these national climate phenomena. The University of Miami and the University of Florida would have the lead in this component.

The ability to more accurately predict weather patterns in advance would be of great benefit to farmers who rely on climate data to make crop determinations. Through greatly expanded knowledge of the El Nino phenomena, we are confident we can provide useful information to the broad regional agricultural community through increased abilities to disseminate early warnings, and increased cooperation and partnerships with other universities, other states, and state agencies.

The Florida Consortium is seeking $3 million to proceed with these activities. The potential savings by mitigating damage resulting from El Nino in the U.S. alone would make $3 million a wise investment. We expect to provide more than $2 million of state funding to maximize this federal investment. The nation will clearly benefit from this work.

Mr. Chairman, thank you for your consideration of this request.

PREPARED STATEMENT OF THE FOND DU LAC BAND OF LAKE SUPERIOR CHIPPEWA

The Fond du Lac Band of Lake Superior Chippewa is presenting this testimony to the Senate Subcommittee on Appropriations for Agriculture. We would like to thank the Chairman and the committee members for the opportunity to present this written testimony on our Fiscal Year 1997 Appropriations Request. The Fond du Lac Band is one of six Chippewa Bands in the Minnesota Chippewa Tribe. The Reservation was established by the Treaty of 1854 with the United States Government. Currently, there are about 3,350 Fond du Lac Band Members. The Fond du Lac Reservation encompasses approximately 100,000 acres, and is located 20 miles west of Duluth, Minnesota and the western end of Lake Superior.

The lands and waters of this region continue to provide game, fish, and wild rice to Fond du Lac Band Members and other citizens in northeastern Minnesota; however, the wild rice stands in this region have been declining in recent history. The Fond du Lac Band is requesting funds from Congress to assist in a cooperative effort to manage and restore the wild rice to our region's wild rice lakes and river stretches. Fond du Lac has developed the **Wild Rice Restoration Plan for the St. Louis River Watershed** in cooperation with the U.S. Fish and Wildlife Service, the U.S. Environmental Protection Agency, the Bureau of Indian Affairs, and the Bois Forte Reservation. The Natural Resources Conservation Service is planning to cooperate on this plan by providing technical assistance. In order to fully develop the resource inventory and management program for this plan it necessary for the Fond du Lac Reservation to receive additional support funds. Although Fond du Lac has developed the capability to inventory, manage, and restore wild rice lakes, the scope of managing and restoring the lakes on this large 3,600 square mile watershed is beyond the resources available. We are also planning to cooperate with the U.S. Forest Service on wild rice lakes within the Superior National Forest and this watershed. This is a shared resource which has been impacted by mainly man caused factors on the watershed. It is therefore justifiable to seek public funds to develop a meaningful effort to manage and restore this valuable public resource.

The Fond du Lac Band of Lake Superior Chippewa is requesting a total of $175,000 for FY-97 to carry out two major wild rice management and restoration projects within the **Wild Rice Restoration Plan for the St. Louis River Watershed**. These funds would be used to provide the necessary equipment, staff, and transportation costs, to implement the basic purpose of the plan. This central project for this Plan is the Wild Rice Management and Restoration Project on the St. Louis River Watershed, which would require $125,000 to begin implementation. These funds are essential to initiate this project to provide the technical assessment equipment and transportation for our Natural Resources Program and for reimbursing cooperating agencies for their assistance. The other project which needs your support to accomplish is the St. Louis River-Wild Rice Restoration Project, which would require $25,000 to carry out the restoration of several hundred acres of wild rice on the lower St. Louis River estuary. This will require the seeding of several thousand pounds of wild rice seed to this area, on which the wild rice is almost extinct. These two projects take place predominately outside of the Fond du Lac Reservation. In order to conduct these wild rice restoration projects we are planning to conduct an educational program on Wild Rice Ecology and related Geographic Information System [GIS] Training Course at the *Fond du Lac Tribal and Community College* [College]. We are requesting $25,000 to develop this course and the related GIS capability in the College's computer lab. The staff conducting the field surveys and management activities will need this course and GIS training to be able to properly conduct this project.

We request that funds be appropriated specifically for this project to the Fond du Lac Reservation, or that funds be secured within the USDA's *Environmental Quality Incentive Program* [EQIP]. The Farm Services Agency could assist us with transferring funds to the Fond du Lac Natural Resources Program for implementing the wild rice restoration plan.

The Fond du Lac Reservation has expended about $172,000 in 1995 and 1996 towards restoring Rice Portage Lake on the Reservation, from its current size of 114 acres to its historical size of 634 acres. This is a multi-year project, and therefore, Fond du Lac cannot afford at this time to expend additional funds on the wild rice resources on the St. Louis River watershed. Another consideration is that these wild rice stands on the watershed are a shared resource for all of the citizens in the region as well as the benefits to waterfowl, for which wild rice is a staple food

Another project which is important to the health and well being of our Band Members is Project Grow. This project is in its sixth year on the Fond du Lac Reservation. Project Grow involves education on gardening and nutrition; and it provides assistance on planting and caring for gardens, and also on harvesting, preserving, and preparing the harvest. To fully implement these tasks in 1997, we are requesting $30,000. This would provide the new equipment and the educational, planting, and gardening staff necessary to properly conduct this project. We hope that this project could be funded within the USDA budget, and that the funds could be efficiently administered to Fond du Lac as directly as possible. The educational component of this project can be developed at the Fond du Lac Tribal and Community College. There is experienced staff on Fond du Lac for establishing the gardens throughout the community.

The Fond du Lac Tribal and Community College is both a Tribal College and a State Community College. The College is one of the 29 tribal college members of the American Indian Higher Education Consortium [AIHEC]. The Equity in Educational Land-Grant Status Act of 1994 established the tribal colleges within the land-grant system and provided funds through authorized programs under this Act to assist tribal colleges. We have heard that the Strengthening Payments of $50,000 for each tribal college may be cut in the FY 1997 budget. This would be very unfortunate as these funds would be very helpful in building the capacity in our College for agriculture and natural resources programs. The Fond du Lac Tribal and Community College is working hard to develop an environmental and natural resources program and research capability at the College. The wild rice and community gardening projects are just one example of the types of projects and educational programs that our College is planning to develop. The Land Grant status of our College is important and we would hope that the funds for developing these programs would be maintained in future budgets.

SUMMARY BRIEF

Introduction

The Fond du Lac Band of Lake Superior Chippewa is one of six Bands in the Minnesota Chippewa Tribe. The Fond du Lac Reservation was established by a Treaty with the United States Government on September 30, 1854 (10 Stat.1109). The Fond du Lac Reservation encompasses approximately 100,000 acres, and is located 20 miles west of Duluth, Minnesota and the western end of Lake Superior.

The lands and waters of this region continue to provide game, fish, and wild rice to Fond du Lac Band Members and other citizens in northeastern Minnesota, however, the wild rice stands in this region have been declining in recent history. The Fond du Lac Band is requesting funds from Congress to assist in a cooperative effort to manage and restore the wild rice to our region's wild rice lakes and river stretches. Fond du Lac has developed the **Wild Rice Restoration Plan for the St. Louis River Watershed** in cooperation with the U.S. Fish and Wildlife Service, the U.S. Environmental Protection Agency, the Bureau of Indian Affairs, and the Bois Forte Reservation. The main goal of this Plan is to: Restore and manage wild rice, and protect its habitat on the lakes, rivers, and streams of the St. Louis River watershed. The watershed encompasses some 3,600 square miles with numerous wild rice lakes and wild rice stands on river stretches. Cooperation on projects within the Plan would help accomplish the overall goal. The new cooperators on the two projects proposed in this request are: the Natural Resources Conservation Service / Duluth Office and State Watershed Office, the U.S. Forest Service / Superior National Forest, and the Fond du Lac Tribal and Community College, which is a Land Grant College.

The two projects which would be implemented with Congressional funds are the **Wild Rice Management and Restoration Project on the St. Louis River Watershed**, and the **St. Louis River - Wild Rice Restoration Project**. The goal of the first project is to implement the assessment of the wild rice resources on the St. Louis River watershed and work with cooperators to determine management and restoration options and to conduct these activities on the wild rice lakes and river sections in the watershed. The second project goal is to restore several hundred acres of wild rice to historical habitat on the lower St. Louis River estuary, by seeding with rice and assessing habitat and growth.

The community gardening and nutrition program on the Fond du Lac Reservation, Project Grow, incorporates cultural and technical information on growing, gathering, post-harvest handling, and preservation of foods and nutrition/health.

Appropriation Request

A total appropriation for FY-97 of $205,000 is requested. This would provide $175,000 to implement two projects within the Wild Rice Restoration Plan for the St. Louis River Watershed. The Project Grow community gardening and nutrition program would be fully implemented on the Fond du Lac Reservation with a $30,000 appropriation.

PREPARED STATEMENT OF THE CITY OF GAINESVILLE, FL

Mr. Chairman and Members of the Subcommittee, on behalf of the City of Gainesville, Florida we would like to express our sincere appreciation for the opportunity to submit the following testimony for your consideration. This testimony highlights one of the City's priority projects for the FY97 budgetary cycle, the Sweetwater Branch/Paynes Prairie Stormwater Project.

The City of Gainesville is seeking federal funds in the FY 1997 Agriculture Appropriations bill, in order to assist our efforts to protect the Florida aquifer from stormwater runoff. In particular, we are hopeful that the Subcommittee will provide the City with $2 million in federal support.

In Gainesville, the Sweetwater Branch basin contains approximately 1,710 acres and is located in the southeast central portion of the City. The outfall from this basin discharges into Paynes Prairie, a State owned preserve and park system, which eventually flows into the Alachua Sink, a natural sink hole that drains directly into the Florida aquifer. This aquifer provides the majority of drinking water to Florida's residents and has a direct impact on the Florida Everglades.

The Sweetwater Branch drainage basin contains urban, commercial, industrial, and residential area stormwater runoff. Because the branch runs through some of the oldest portions of Gainesville, most stormwater runoff is directly discharged into the Branch with very little flooding or pollution removal treatment. This situation has created a concern among environmentalists, business leaders, and concerned citizens throughout the region that Paynes Prairie and the Florida aquifer are being compromised.

With this in mind, the City has held discussions with State officials, as well as concerned citizens within Gainesville, to devise a project that would alleviate this problem. This project's goal is to reduce or eliminate the sediments, debris, nutrients and general pollutants currently being discharged into Paynes Prairie and eventually the Florida aquifer. Current projections are that the project would consist of the following three components:

- the purchase of undeveloped property in the vicinity of State Road 331 and Sweetwater Branch;
- the construction of maintainable sediment and debris removal systems; and
- the construction of maintainable nutrient removal systems.

An in-depth engineering analysis of the creek system, property topography, associated wetlands, and other pertinent factors is needed to determine the optimum and appropriate scope of property purchase and facilities construction. The City is prepared to pay some of the cost for this analysis, but we are simply unable to bear the entire burden. As a result, we request that the Subcommittee appropriate $2 million under the Fund for Rural America within the FY97 Agriculture Appropriations bill to assist our efforts. Once the project construction is complete, Gainesville Stormwater Management Utility, a public utility, would provide the required annual maintenance for the facility and no federal maintenance funds would be needed.

This is a critical and much needed project for the City of Gainesville, as well as the entire State of Florida, and we respectfully ask the Subcommittee for its consideration of the Sweetwater Branch/Paynes Prairie Stormwater Project.

GEORGETOWN UNIVERSITY MEDICAL CENTER

PREPARED STATEMENT OF DR. RAYMOND WOOSLEY, PROFESSOR AND CHAIRMAN OF THE PHARMACOLOGY DEPARTMENT

Mr. Chairman and members of the Committee, I am Dr. Raymond Woosley, Professor and Chairman of the Pharmacology Department at Georgetown University Medical Center, representing Rev. T. Byron Collins, S.J., Assistant to the President of Georgetown University. I am here to testify in support of thoughtful reform in the Food and Drug Administration (FDA) that will increase the access of physicians to reliable information on prescription drugs.

Legislation to reform the FDA is being seriously considered in both the House and the Senate. Senator Kassebaum's Senate Bill 1477 includes provisions to remove FDA restrictions that prevent manufacturers from disseminating scientifically valid information to physicians about new uses for their products. We support these provisions but note that there will remain a serious gap in the drug information that is available to physicians. The manufacturers have very effective programs to inform physicians about the FDA-approved uses of their products, but they will still be severely limited in how they can discuss new and unapproved uses. Also, the manufacturer's information about drugs is often challenged by hospitals, HMOs and insurers that seek to limit their expenditures for new drugs. Missing is a reliable unbiased source of information that *first* considers the patient's need for the very best cost-effective therapy. We believe that the logical source of such independent and unbiased information about drugs is the existing academic medical centers that have expertise in clinical pharmacology and therapeutics. We have asked Senator Kassebaum to authorize in S1477 a pilot program to form a consortium of Centers for Education and Research in Therapeutics (CERT). These centers could evaluate drugs after marketing to detect unforeseen problems and new applications. They could examine medications in understudies, vulnerable patient populations such as the elderly and children. Most importantly, these Centers could conduct balanced educational programs for physicians, nurses, pharmacists, and even the public on the best use of medications. This information is vitally needed and, through CERT, would be made available through the existing network of medical colleges throughout the United States.

We have suggested that CERT be initiated by the FDA as a four-year pilot project phased in at a consortium of three academic medical centers selected by competitive peer review. When authorized, we request that the committee consider a total appropriation of $9 million in the first year, increasing to approximately $15 million in the third and fourth years. Subsequent funding and incorporation of more Centers should be dependent upon the results of a scheduled evaluation of CERT's impact on therapeutics. I have faith that it will be a sound investment.

We request the Committee support this innovative and cost-efficient initiative.

HOLDEN'S FOUNDATION SEEDS, INC.

PREPARED STATEMENT OF DR. DAVID HARPER

SUMMARY: We are requesting $500,000 be added to the $500,000 appropriated in 1995, for a total of $1,000,000 to be appropriated annually for enhancing corn germplasm.

1. Corn is a key resource providing food, industrial uses, livestock feed, and export.
2. Corn production in the U.S. is based on less than 5% of corn germplasm available in the world. Broadening the germplasm base would provide genes to improve yields and protect against new disease, insect and environmental stresses. Exotic germplasm would also be a source for changes in grain quality being demanded by export markets, industrial processors, and other end users.
3. Most exotic germplasm is unadapted to growing conditions in the U.S. This proposal is a joint USDA/ARS, university, and industry effort to adapt this material, so that it can be used by commercial breeders in the development of new hybrids to meet the demands of the American consumer and our foreign markets.
4. We greatly appreciate the $500,000 previously appropriated for this research, beginning in the 1995 federal budget. This funding is supporting the two main USDA/ARS locations involved in this research (Iowa and North Carolina), as well as USDA/ARS and university locations in Delaware, Georgia, Illinois, Louisiana, Mississippi, Missouri, New York, Ohio, Pennsylvania, and Wisconsin. Industry is providing $450,000 in-kind support annually for this effort.
5. The additional appropriation of $500,000 (total $1,000,000) annually would enable the Iowa and North Carolina locations to purchase equipment and add staff necessary for carrying out this research. It would also provide funding for the increased germplasm evaluation and breeding necessary to test and enhance the exotic materials available.

BACKGROUND: Corn is the major crop on the cultivated land of the USA where approximately 75 million acres are planted each year. U.S. corn production, accounting for about half of the world's annual production, adds over $16 billion of value to the American economy as a raw material. About 20 percent ($3.2 billion) of this production is exported each year, thereby providing a positive contribution to the nation's trade balance. Approximately 17 percent of the yearly corn crop is industrially refined. A portion of refined products is exported resulting in an additional $1.4 billion in export. Through feeding livestock, the rest of the crop is processed into meat and dairy products that affect everyone in our society. *Corn is a key resource within our country.*

CONCERNS: All of this production is based on using less than 5% of the corn germplasm available in the world. Less than 1% of our commercial corn is of exotic (foreign) origin, and tropical exotic germplasm is only a fraction of that. This situation exists because private sector corn breeders have generally concentrated on genetically narrow based, or elite by elite, sources for their breeding efforts, since their use results in getting hybrids to the marketplace faster.

Traditionally, corn has been treated as a commodity. In recent years corn grain users and processors have become more interested in the quality characteristics of the grain itself and how this affects their business. Since much of the exotic germplasm has undergone selection for many indigenous uses (foods, beverages, etc.) by various cultures, it seems likely that new grain quality characteristics will be found in exotic rather than the narrow-based germplasm now used. A small increase in value to the grain, such as 10 cents per bushel, would increase its annual value by $800 million for an eight billion bushel harvest[1].

Breeders must still be concerned with breeding for higher yields so that U.S. corn farmers can remain competitive. Tapping into the broader germplasm pool could provide new sources of genes for higher yield and other performance traits, such as disease and insect tolerance or improved stalk and root strength.

A further concern with a narrow genetic base is the potential for widespread disease or insect damage due to new diseases or insect species spreading into U.S. corn growing areas. It is more likely that resistance to these dangers would be found in genetically diverse exotic germplasm sources than in our breeding material. One major benefit would be reduced pesticide use. In addition to protection against diseases and insects, these exotic materials provide insurance for unforeseen climatic or environmental problems.

A great deal of excitement has been generated over the new techniques of biotechnology, especially over the potential value to the corn industry of gene transformation using genetic engineering. Research conducted on exotic germplasm could yield many beneficial genes that genetic engineers could quickly transfer to commercial hybrids.

---

[1] Salhuana, Pollak, Tiffany 1994. Public/Private Collaboration Proposed to Strengthen Quality and Production of U.S Corn through Maize Germplasm Enhancement. Diversity Vol. 9, no. 4, 1993/Vol. 10, no. 1, 1994.

LAMP PROJECT: What would be the source of this exotic germplasm? Over the years, collections of corn have been made from farmers' fields and other sources all over the world, and are stored in various germplasm banks. In 1987, the Latin American Maize Project (LAMP) was initiated to evaluate these corn collections (accessions). It was a cooperative effort among 12 countries to identify accessions that might provide valuable source material for further improvement in hybrid and open-pollinated cultivars in the U.S.A. and other areas. Pioneer Hi-Bred International gave USDA/ARS $1.5 million to fund the LAMP research.

Nearly 12,000 maize (corn) germplasm accessions were evaluated. In successive stages, the project identified the top 268 accessions. The environmental areas of adaptation for these 268 "elite" populations range from temperate to tropical, and are prime candidates for enhancing the U.S.A. corn germplasm base.

GERMPLASM ENHANCEMENT: Most of this germplasm is unadapted to growing conditions in the U.S. and requires genetic enhancement to make it adapted, or able to grow and mature in our environmental conditions. Enhancement basically means that these exotic materials will be bred with U.S. adapted materials and breeders will select progeny that carry the desired exotic traits and are also adapted to U.S. growing conditions. This will require a concerted long-term breeding approach by corn breeders at numerous locations (environments) throughout the U.S. Only after this process of enhancement will these exotic materials be ready to enter commercial corn breeding channels and be effectively utilized by a broad cross-section of the industry in the development of new hybrids for farmers and corn users.

The total process of enhancement is too large and long-term for public institutions and/or seed companies to accomplish individually. An ambitious task of this nature can only be completed through a coordinated and cooperative effort between the USDA/ARS, land-grant universities, and industry.

The Corn and Sorghum Basic Research Committee of the American Seed Trade Association has been concerned that enhancement of this exotic germplasm would proceed. The Committee consists of representatives from about 30 companies actively involved in the corn and sorghum seed industry, and at the committee's request, Dr. Linda Pollak, Research Geneticist, USDA-ARS, et al, developed a proposal for enhancing exotic germplasm starting with materials which will include the elite LAMP accessions as noted above. This proposal has developed into the U.S. GEM (Germplasm Enhancement of Maize) Project.

U.S. GEM PROJECT OUTLINE: Since this project serves a national need, the primary effort and direction has come from the USDA/ARS. Two permanent USDA/ARS locations are being used as primary sites for enhancement breeding and coordination. One is at Ames, Iowa, where the USDA/ARS currently conducts corn evaluation and enhancement efforts. Dr. Linda Pollak, Research Geneticist, is located there. Dr Pollak was the Principal Investigator of the U.S.A. for LAMP, and is the lead scientist for this project.

The other permanent site is the USDA/ARS location in North Carolina. This site has responsibility for initial evaluation and conversion of the tropical materials. Tropical corn populations normally will not reach maturity in the Corn Belt, but will produce seed in North Carolina. After initial enhancement of the tropical materials in the South, they will be sent to Ames for further enhancement and testing in Corn Belt conditions. Dr. Marty Carson is in charge of this program.

A number of corn researchers at various land-grant universities and other ARS locations are also taking part in the enhancement and evaluation of this exotic germplasm. This cooperative effort is very important and serves not only as a source of improved germplasm but also provides excellent training for future plant scientists.

Industry is also involved. A total of 21 companies have pledged research nursery and yield trial plots to be used in this breeding effort. This in-kind support is valued at $450,00 per year.

An important component of the project is an annual meeting of all cooperators to evaluate progress and plan strategies. An information network has been established to keep everyone up-to-date. A U.S. GEM Technical Steering Group consisting of members from USDA/ARS, University, and Industry has been formed for guidance and administration of this cooperative effort.

This germplasm enhancement project is public and is open to all public sector institutions as well as private seed companies. Information will be freely available and publicly developed materials will remain in the public domain, accessible to all.

ACCOMPLISHMENTS IN 1995: Following is a description of accomplishments and research conducted at various locations using 1995 funding .

Ames, Iowa: Priorities for the corn enhancement work at this location are overall project coordination, data analysis and management, management and release of enhanced germplasm, analysis of materials for value-added traits, and as one of the many breeding sites. Two USDA/ARS GS-9 support scientists were added to the present staff. One, Susan Duvick, is managing laboratory evaluations for value-added traits. The other scientist, Eric Wellin, is handling data management and analysis. In cooperation with Iowa State University, a postdoctoral plant physiologist is working on forage quality of GEM temperate accessions and a graduate student is studying environmental effects on starch quality measurements.

A laboratory has been set up for evaluating oil, starch, and protein in the exotic accessions and in the breeding populations made up of exotic materials crossed to proprietary corn belt inbreds. In results from this past year, two breeding crosses measured total protein above 16% (corn belt germplasm has 10%); this is potentially useful for food and feed applications. Four breeding crosses showed total saturated fatty acid contents above 16% (corn belt is 12%), which has potential as a solid non-hydrogenated margarine product. Two breeding crosses recorded total oil levels above 5.6% (corn belt is 4%), which would be useful in feed applications.

A database for information collected is being set up, and will be accessible to cooperators through the Internet.

Raleigh, North Carolina: The focus of this location is twofold. One priority is to develop enhanced material adapted to the Southern U.S. corn growing conditions. The second is to be a stepping stone for adapting tropical material to Midwest conditions. A full time USDA/ARS Category 3 (support) scientist, Vickie Brewster, was added this year and will function in the area of germplasm testing and enhancement.

Forty-four breeding populations were tested for resistance to various leaf diseases and stalk rots. Selections were made for improved material with resistance to these diseases as well as for improved yield, standability, and adaptation to North Carolina conditions. For example, four of the Tropical x elite breeding crosses were more resistant to Aspergillus ear rot than the commercial check hybrid. Aspergillus produces a toxin that is dangerous to livestock and can be a serious problem in many areas in the U.S. Three of these breeding crosses yielded as much as the commercial check hybrids in yield trials.

Other public cooperators conducted evaluations as follows: Yield data accumulation in Delaware. Resistance to fall armyworm and corn earworm at two locations in Georgia. Resistance to kernel infection by *Aspergillus ssp.* and subsequent aflatoxin contamination in Georgia. Resistance to northern and southern corn leaf blights, northern corn leaf spot, gray leaf spot, anthracnose leaf blight, and rind puncture resistance (as a measure of stalk quality) in Illinois. Corn rootworm resistance in Iowa. Grain physical properties, wet milling properties, and starch functionality in Iowa. Resistance to Aspergillus and maize weevil in Louisiana. Resistance to fall armyworm and southwestern corn borer at two locations in Mississippi. Resistance to European corn borer and corn rootworm in Missouri. Resistance to anthracnose stalk rot in New York. Physical and compositional grain quality in Ohio. Gray leaf spot resistance in Pennsylvania. Evaluation of silage quality in Wisconsin.

Demonstration nurseries were planted at Ames, Iowa, as well as Madison, Wisconsin; Raleigh, North Carolina; and Henderson, Kentucky for viewing by cooperators. Field days were held in mid-September at Ames and Madison.

A total of 227 exotic x proprietary inbred line breeding crosses have been made by the cooperating private companies. Hybrid crosses were then made with them for testing this summer. The private cooperators will continue the breeding and adaption of these accessions following the protocol developed by the GEM Technical Steering Group.

RESEARCH IN 1996: Research will continue at the various USDA/ARS, university, and company locations similar to 1995.

EFFECTS OF INCREASED FUNDING BEGINNING IN 1997: Appropriation of the additional $500,000 annually would provide funds to increase research in the following ways:

Ames, Iowa: Additional funding would provide laboratory equipment to conduct analyses of feed quality (approximately 60% of corn is fed to animals) and to cooperate with animal nutritionists at ISU. Increased starch digestibility is seen as being valuable in making corn a more efficient feed with less animal waste. An increase would provide money for purchasing a research plot combine for conducting yield trials. The increase in winter nursery funding would allow the Ames location to support the public breeding activities and allow public materials to reach commercial breeding programs in half the time. A small amount of money would be available to help public cooperators to attend the annual meeting and field day.

Raleigh, North Carolina: With increased funding, a technician would be hired to assist the research scientist; it is impossible for a single scientist to carry on a research program of this magnitude without technical help. This location has a number of other equipment needs, such as research plot combine, that have to be fulfilled in order to be fully equipped (*see "Budget Summary"*). Current resources restrict testing and development work to only two tropical x elite breeding crosses per year. With the increased funding, the number of breeding crosses could be tripled to 6 or more, greatly speeding up the introduction of adapted GEM material into private and public breeding programs. Additional funding would provide for yield trial testing at more locations and more extensive disease and insect resistance screening, greatly increasing the precision in selecting materials that are high yielding and have high levels of pest resistance.

Other Public Cooperators: The increase in funding for public cooperators (to $350,000 per year in the third fiscal year) would allow for full evaluation and development of new breeding materials improved for productivity as well as disease and insect resistance and value-added traits. Most public cooperators are willing to participate, but cannot unless they have at least partial funding. There are approximately 30 public cooperators now, and as the project develops we are likely to get more. The full amount of funding for

$350,000 would allow 30 cooperators to each receive approximately $11,667 per year to help fund their participation.

CONCLUSION

Corn hybrids in the U.S. have a very narrow genetic base, utilizing only a small percentage of all available corn germplasm. This greatly increases vulnerability to unforeseen pest problems, and may lead to an eventual yield cap. Exotic corn germplasm could provide genes for resistance to pest problems and for increased yields. These exotic materials may also contain quality traits to meet new market demands. This will help ensure the U.S. maintains its world leadership in providing the best raw materials to meet the demand for the production of meat, eggs, milk, and many other food and industrial uses.

The LAMP project identified the top 268 corn accessions from among 12,000 populations evaluated. The present proposal represents a joint USDA/ARS, land-grant university, and industry effort to enhance these and other exotic accessions so that they can enter commercial corn breeding programs. The result of this cooperation will be an increase in the productivity, quality, and marketability of hybrid corn in the U.S. and for export, benefitting the farmer, the feed and processing industries, and the consumer.

Therefore, the ASTA Corn and Sorghum Basic Research Committee hereby requests the 104th Congress of the United States to include funding of $500,000 (in addition to the $500,000 appropriated initially in 1995, for a total of $1,000,000) annually for this corn germplasm enhancement project beginning with the 1997 federal budget.

BUDGET SUMMARY

This is a summary of the operational and capital budgets for 1996, 1997 and 1998; 1998 will only be operational. The budget is divided into the Corn Belt Location and corresponds to Ames, Iowa (USDA-ARS) and the cooperators in the Corn Belt area. The Southern Location corresponds with Raleigh, North Carolina (USDA-ARS) and the cooperators in states in the South. *For a complete copy of the budget, please contact Dr. David Harper, Holden's Foundation Seeds, Inc., Box 839, Williamsburg, IA 52361 or call 319-668-1100.*

CORN BELT LOCATION *ITEMS*	*1996*	*1997*	*1998*
Personnel	$146,800	$176,300	$162,500
Office/Field	42,000	86,000	87,500
Capital Equipment	51,000	150,000	50,000
Specific Agreements for Public Cooperators*	60,000	187,700	300,000
Total for Corn Belt Location	*300,000*	*600,000*	*600,000*
SOUTHERN LOCATION			
Personnel	65,000	98,000	107,000
Office/Field	25,300	48,000	55,000
Capital Equipment	34,700	124,000	88,000
Specific Cooperator Agreements	25,000	30,000	50,000
Total for Southern Location	*150,000*	*300,000*	*300,000*
TOTAL USDA/ARS OVERHEAD	*50,000*	*100,000*	*100,000*
SUMMARY			
Corn States Location	300,000	600,000	600,000
Southern Location	150,000	300,000	300,000
USDA/ARS Overhead	50,000	100,000	100,000
GRAND TOTAL	*$500,000*	*$1,000,000*	*$1,000,000*

*Specific Agreements for Public Cooperators: Agreements for public cooperation are being made with universities and ARS scientists in many locations, which could include the following states: Delaware, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New York, North Carolina, North Dakota, Ohio, Pennsylvania, South Dakota, Tennessee, Texas, and Wisconsin. Research at these locations would include selection for disease and insect resistance, evaluation for value added traits, and yield trials.

HUMAN NUTRITION RESEARCH CENTER ON AGING, TUFTS UNIVERSITY

PREPARED STATEMENT OF DR. IRWIN H. ROSENBERG, DIRECTOR

My name is Irwin H. Rosenberg. I am the Director of the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University (HNRCA) in Boston. I am grateful for your invitation to provide this testimony for the record. My prior testimony provided to your Subcommittee addressed how earlier appropriations have helped us make scientific advances which address our problems affecting the nutritional needs of the elderly and the underlying role of nutrition in the aging process. Specifically and generally, I had addressed the issues and needs of the HNRCA, which I are discussed briefly in my closing statements. Today, I would like to take this opportunity to address the needs of all of our Nutrition Research Centers.

In spite of our ability to reduce health care costs through dietary interventions, our national investment in human nutrition research has stagnated in real dollars since the early 1980s. Currently, the Agricultural Research Service (ARS) expenditure on human nutrition research represents less than 0.2% of the cost of government food assistance programs, including the special supplemental program for Women, Infants and Children (WIC), child nutrition programs, nutrition programs for the elderly, school lunch, and food stamps programs, a total of $40 billion a year. Increasing the commitment to research vital to these programs to 0.4% of the cost of food assistance programs would permit the Agricultural Research Service (ARS) Human Nutrition Research Centers to markedly improve the scientific basis for the federal food assistance programs and the dietary guidelines for all Americans, and substantially reduce health care costs by defining interventions for reducing disease risks.

The goals of the USDA/ARS Nutrition Research Initiative are to:

- Reduce health care costs and enhance the quality of life by defining the relationship between diet, inheritance, and lifestyle and the risk for chronic diseases, such as obesity, diabetes, cardiovascular disease and cancer.

- Improve the scientific basis for more effective federal food assistance programs by better defining nutrient requirements and monitoring food and nutrient consumption and identifying socio-economic, cultural, and environmental forces that influence eating habits.

- Generate a more nutritious food supply by conducting research that defines the basis for modifying the health promoting properties of plant and animal foods and make beneficial changes in the composition of foods using biotechnology, genetics, and new food processing technologies.

- Improve the resistance to acute infections and immune disorders by investigating the interaction between nutrition and immune function.

- Enhance the capacity to promote changes in diet habits by basic research on neural processes, memory and learning, appetite regulation, and physiological factors influencing food habits.

- Extend dietary guidance to nutritionally-vulnerable groups within the U.S. by determining how food consumption at critical points in the life cycle affects normal development and risk of disease.

The coordinated efforts of the USDA/ARS Human Nutrition Research Centers will focus on the following five vital concerns: (1) Food, Phytonutrients and Health; (2) Healthy Body Weight to Avoid Diabetes and Other Diseases; (3) Brain Function and Resistance to Mental Decline; (4) Bone Growth and Protection from Osteoporosis; (5) Foods and Nutrients Roles in Infectious Diseases.

Since the Center opened in 1982, the Human Nutrition Research Center on Aging has established itself as the preeminent institution in the world in research on the problems relating to nutrition and aging.

The intersection of the toll of degenerative disease, including heart disease, cancer, diabetes, osteoporosis, and cataract, and the potential benefits of nutrition both with respect to aging and chronic disease places human nutrition research at the top of our agenda for health promotion and disease prevention. The HNRCA has led the nation in identification of ways in which dietary and nutritional factors can ameliorate the toll and loss of health from disabilities associated with aging. With full annual funding, we will be able to expand and initiate the following priority areas:

- Determinants of age-related loss of cognitive function and dementias in the elderly with special attention to nutritional factors that may prevent vascular forms of dementia, including dietary antioxidants and B vitamins in foods.
- Expand capacity to carry out metabolic and applied and nutritional studies in elderly human adults with the focus on nutritional requirements for healthy aging and prevention of disease, especially loss of bone density and immune function.
- Define basic mechanisms that connect aging and loss of muscle strength and function and the way both diet and exercise can influence this process; expand capacity to test highly effective combined exercise and nutrition systems in the free-living older and aging populations to prevent disability.
- Apply molecular, genetic, body composition and functional biochemistry methods to assess the risk of diet-related diseases in the aging population; develop assessment tools that can be applied to the measure of nutritionally-related disease risk in this population.

With full funding, we will be able to address our mission to examine the nutritional needs of elderly Americans, including minority populations in urban and rural settings, to provide the scientific basis for determining the nutritional status of elderly Americans in different settings, to refine programs of dietary and nutritional interventions which will promote health and prevent degenerative disease and disability, and thereby diminish the burden of cost for care of the elderly population in this country.

As a citizen, as well as a scientist, I do not minimize the strides taken by our legislative bodies to bring responsibility and balance to the Federal budget, especially at a time when the needs of our citizenry appear to be great. I do, however, wish to emphasize the effects that constrained investment in nutrition science will have on our country's ability to address the health of its citizens. Good nutritional practices can be one of the leading solutions to decreasing demand on the health care system. Conversely, if we begin to lose momentum in nutrition science through our inability to address research problems, then we will be faced with a long-term cost inefficiency.

We are most grateful for the support of this Subcommittee and hope that you recognize the return on investment in these vital research centers, and the need to move to the next level of nutritional health from our farms to our people.

In conclusion, Mr. Chairman, I would like to respectfully request an additional $3 million in funding over the FY 1996 funding level. This increase, Mr. Chairman, will allow us to maintain the efforts of the many excellent men and women researchers, the nutrition-related volunteers, and to move into new and demanding nutrition research areas which have been severely curtailed by funding limitations in the last five years.

HUMANE SOCIETY OF THE UNITED STATES

PREPARED STATEMENT OF WAYNE PACELLE, VICE PRESIDENT, GOVERNMENT AFFAIRS

The Humane Society of the United States (HSUS) is the nation's largest animal protection organization representing more than three million members and constituents. Our organization has departments that focus on issues relating to companion animals, farm animals, animal research, wildlife, investigations, and government affairs. We have ten regional offices across the country. The HSUS is pleased to offer testimony to be included in the record for the Fiscal Year 1997 Agriculture Appropriations hearings.

SUSTAINABLE AGRICULTURE PROGRAMS

Public interest in sustainable agriculture farming systems continues to grow. The HSUS supports these systems which improve the health of consumers and animals, and the quality of the environment and the economy. We join alternative and sustainable agriculture organizations in requesting funding of the following sustainable agriculture programs.

The Sustainable Agriculture Research and Education (SARE) program is a competitive grants program designed to achieve more cost-effective and environmentally-friendly agriculture, with emphasis on optimizing on-farm resources while increasing farm profitability and preventing pollution.

Many farmers and ranchers are interested in obtaining information on the various existing sustainable agriculture technologies. The Sustainable Agriculture Technology Development and Transfer Program (SATDTP) was designed to provide this service through a nationwide training program for extension agents in conjunction with a nationally-coordinated, state and regionally-based outreach effort.

The SARE program and SATDTP are the only federal research and education programs that focus solely on sustainable agriculture systems and practices. We support the Administration's request of $8.1 million for the SARE program and $3.4 million to SATDTP.

ORGANIC FOOD PRODUCTION ACT

Public demand for organic agriculture products continues to increase, with reasons for purchase ranging from environmental and health concerns to that of enhanced animal health and well-being. Annual sales this year will top $3 billion. Adopting consistent national standards for organic products is very important, and now is a crucial time for the national organic program to begin full implementation. The HSUS joins the organic community in urging that the program retain the level of funding at $.6 million. This would enable implementation of the program and facilitate getting information about the program distributed.

AGRICULTURAL TECHNOLOGY AND TRANSFER FOR RURAL AREAS (ATTRA)

The HSUS strongly supports funding for ATTRA at the level of $1.5 million for FY'97. Authorized by the Farm Bill, ATTRA was first funded in 1987. It serves the entire nation with specialists who provide farmers and others with sustainable agriculture information, research results, and information based on practical experience. There is no other source of readily available information covering such a wide scope of sustainable agriculture topics. ATTRA handled 16,000 cases in 1995 and has already serviced over 12,000 requests in 1996. The funding level requested for FY'97 will allow ATTRA to continue to perform this important function.

PACKERS AND STOCKYARD ADMINISTRATION

We support the USDA's request for $14 million to fund the programs of the Packers and Stockyards Administration for FY'97. Adequate funding of this agency is of particular concern in order to enable them to meet their responsibility of monitoring the handling of animals at stockyards to prevent abusive treatment from occurring.

ANIMAL WELL-BEING RESEARCH

Living conditions for farm animals which provide for their health and well-being are increasingly recognized as an important component of food quality, and are also of increasing concern to the public. Research into understanding what is required to provide for the well-being of these animals is needed to help address these concerns. However, funding of such research is virtually nonexistent in the U.S. Of the funds awarded by the National Research Initiative (NRI) in 1995 through it's "Sustaining Animal Health and Well-Being" program, an extremely small fraction was spent on animal well-being research.

The HSUS urges that a significant amount of the funding allocated to the animal division of the NRI be used specifically for well-being research, thereby achieving a much better and greatly needed balance between animal health and animal well-being research.

ANIMAL WELFARE INFORMATION CENTER

The Animal Welfare Information Center (AWIC) of the National Agricultural Library (NAL) was started as a Congressional mandate in the 1985 Farm Bill. By law, AWIC's main missions are to provide information that can be used for: 1) training researchers about more humane animal care and use and 2) improving methods of animal experimentation that can reduce or replace animal use or minimize pain or distress to animals.

As part of the NAL, AWIC also provides information to the public. There are 56,000 users of its services, of which over 43% are researchers, technicians, veterinarians, IACUC members, exhibitors and dealers. Federal agencies are the second largest group of users, followed by educators, students, and others.

Additionally, recommendations to add farm animal welfare issues to the scope of AWIC emerged from the 1993 Purdue University and USDA conference on food animal well-being. Due to the great success of the AWIC program in the U.S., it is being duplicated in other countries, with farm animal welfare information included in its services.

It is our understanding that the USDA is discussing the elimination of positions at AWIC and the center being absorbed into the NAL. Such action would ultimately eliminate the special services it currently provides and should be prevented.

Since its inception, the center has been appropriated $750,000. However, only a fraction of this amount is received by the center. We request that increased funding be provided to AWIC so that this program can continue and the Farm Animal Welfare component can be added to their services.

ANIMAL DAMAGE CONTROL

Animal Damage Control (ADC) is one of the most controversial programs in the USDA. The HSUS is concerned that it continues to focus on killing wildlife rather than preventing the damage sometimes caused by wildlife. The program has become the subject of intense public scrutiny and demands for its abolishment are increasing.

The majority of federal funding for ADC operational activities is directed toward coyote control in Western states. The results of scientific research have shown that control of general coyote populations, as opposed to individual offending animals, is futile and even counterproductive in stopping damage. However, the former approach continues to be used by ADC employees. As a result, far more coyote killing is undertaken than is necessary to effectively handle livestock losses. In addition, despite ADC Program policies which instruct employees to give preference to the use of non-lethal techniques, a recent report of the General Accounting Office (GAO/RCED-96-3) concluded that ADC employees in the states reviewed "used lethal methods in essentially all instances to control livestock predators."

The HSUS believes that the solution to the problems posed by the ADC program lies not in its abolishment, but in emphasizing education and self-help. By teaching livestock producers and property managers how to prevent or reduce wildlife-caused problems themselves, the cost of the program would be substantially reduced, while its effectiveness would markedly increase. Under this approach, lethal control would only be used if appropriate, non-lethal efforts to prevent or reduce the problem have failed.

A similar program of shared responsibility has effectively reduced wildlife-caused damage in Kansas for a fraction of the federal share of the cost of the ADC program in most Western states. The HSUS recommends, therefore, that the Subcommittee direct APHIS/ADC to undertake a shift in focus from direct control services to education/self-help. Lethal control would be provided by the government only as a last resort. With such a change, operational funding for Western states could be reduced by approximately 65 percent immediately, with further reductions possible as the changed focus becomes established. In addition, we urge that the program be directed to spend 85 percent of funds allocated to ADC research on the identification and development of non-lethal, non-injurious control methods.

ANIMAL WELFARE ACT

The HSUS requests $12 million for enforcement of the Animal Welfare Act (AWA). A lack of sufficient funding in this area has exacerbated the gross inadequacies that exist in the level of AWA enforcement. These inadequacies result in direct animal suffering in USDA licensed facilities.

Facilities that house animals covered under the Animal Welfare Act are not being inspected with enough regularity to ensure adequate enforcement of the Act: **currently, there are 73 inspectors covering 13,000 licensed facilities, including 2992 registered research facilities that house laboratory animals.** The HSUS supports funding for an immediate increase in the number of field inspectors, as well as for a mandatory training requirement for all inspectors and investigators.

In addition to the obvious discrepancy between agency resources and enforcement needs, a recent internal USDA report from the Office of the Inspector General revealed that those few inspectors who are attempting to do their job are being impeded by their supervisors. Among other findings, the report disclosed that inspectors were told which facilities to inspect, when to inspect them, and were instructed not to write up certain violations of the Animal Welfare Act. Any appropriations to improve enforcement of the Animal Welfare Act must be tied to a requirement that the USDA act immediately to respond to these recent findings.

The HSUS also suggests modifications to the operation of Animal Care that could increase government revenues. These suggestions include: an increase in the fees for dealers and exhibitors, the prohibition of random source class B dealers, reclassification efforts to streamline operations, and the imposition and collection of strict penalties and fines not only for violations of the Act, but also for failure to be present for an inspection. Current estimates indicate that APHIS collects only 25% - 50% of the fines that have been imposed for violations.

Our organization supports current efforts to strengthen USDA regulations covering large scale commercial breeding facilities. There are a number of serious problems existing in the commercial breeding trade, and USDA licensed facilities need to be brought into compliance immediately or shut down completely if compliance cannot be met.

MARKET ACCESS PROGRAM

The HSUS requests that no monies under this program be allotted to the Mink Export Development Council. From 1989 to 1995, over $13 million in federal funds were handed over to the Mink Export Development Council or any other mink industry cooperative. Despite this large commitment of funds, which were used primarily for fashion shows overseas, the value of mink exports declined by 33% and U.S. production dropped by more than half (Source: Fur Age Weekly). In addition, mink fur is purely a luxury item for which animals are subjected to extreme cruelty. Last year, an overwhelming majority of the Congress agreed that the mink industry should not receive a government subsidy under this program. In light of these facts, continuing to bar funding to the Mink Export Development Council is more than warranted.

THE HORSE PROTECTION ACT

The HSUS supports the full appropriation of funds as authorized by law under the Horse Protection Act. The authorization limit for the enforcement of the Act has been frozen at $500,000 since the enactment of the law in 1970. In addition to the devaluing effects of inflation, the actual appropriation has been drastically cut in recent years. USDA received less than $350,000 for the Horse Protection Act program during the past fiscal year, and only about $260,000 of that money was available for enforcement purposes.

The HSUS requests that $500,000 be appropriated for the next budget year. This amount represents the absolute minimum expenditure necessary to carry out the provisions of the Act. It is essential to insure the proper training of USDA enforcement personnel in the use of thermovision and other diagnostic techniques employed to detect the illegal soring of gaited horses. It will also support some needed research. The full appropriation will enable USDA staff to attend a representative number of target horse shows (approximately 10%) and it will help to improve the training and oversight of non-governmental enforcement personnel (known as Designated Qualified Persons or DQP's.)

The HSUS also wishes to go on record as stating that the Tennessee Walking Horse industry has demonstrated that they are clearly incapable of effective self-regulation as envisioned by the 1976 amendments to the Act. Industry inspectors consistently report fewer than half the number of violations cited when USDA personnel are in attendance. Also, an increasing number of walking horse shows have no inspection programs whatsoever.

COMMERCIAL TRANSPORTATION OF EQUINES FOR SLAUGHTER

The recently passed farm bill allows for the promulgation of regulations for the humane and safe transport of horses shipped to slaughter within the U.S. We support full development and implementation of thorough regulations to remedy the current mistreatment and inhumane conditions of horses transported to slaughter.

Our two year investigation and subsequent research resulted in several areas of serious concern regarding how these horses are treated and transported. These areas include, but are not limited to, water, food and rest during transport, the interior height of the vehicles, the design and use of many livestock vehicles, the segregation of horses by size and the segregation of fractious horses and stallions from others. protection from the elements, and the shipment of seriously injured, late-term pregnant mares, foals and ill or incapacitated horses. We are also concerned about the lack of any record keeping by which to establish ownership or track these animals.

We urge full funding be appropriated for the promulgation of these regulations and specifically request $245,000, the cost estimated by USDA. Although we do not anticipate an increase in the number of USDA inspectors to enforce these regulations, we are requesting $525,000 be appropriated for enforcement.

ILLINOIS GROUNDWATER CONSORTIUM

PREPARED STATEMENT OF DR. JOHN YOPP, ASSOCIATE VICE CHANCELLOR, ACADEMIC AFFAIRS AND RESEARCH, SOUTHERN ILLINOIS UNIVERSITY AT CARBONDALE

Mr. Chairman and Members of the Committee:

We are pleased to have this opportunity to discuss with you the proposed FY1997 funding request of the Illinois Groundwater Consortium. The consortium respectfully requests an FY1997 appropriation of $750,000 to continue its critical study of the effects of the Flood of 1993 and 1995 on the contamination of ground and surface water and soil in Mississippi River region.

The Illinois Groundwater Consortium grew out of an FY1990 appropriation of $500,000, provided by this Subcommittee, to Southern Illinois University at Carbondale (SIUC) to focus on this important topic. As a result of this appropriation, SIUC joined forces with the Illinois State Geological Survey, Illinois State Water Survey, University of Illinois Cooperative Extension Service and the University of Illinois Agricultural Experiment Station to effectively work together toward providing a scientifically valid basis upon which meaningful agricultural chemical management and regulatory decisions can be based. With the continuation of these studies and the focus on the effects of the 1993 and 1995 flooding, Southern Illinois University at Edwardsville has joined the Illinois

Groundwater Consortium to lend its expertise in ecology and plant biology to the research activities of the Consortium.

The funds appropriated by Congress come to SIUC through the U.S.D.A. The Advisory Committee of the Illinois Groundwater Consortium works closely with the U.S.D.A. Over the past six years a close and effective working relationship has grown with the U.S.D.A. which enables the Consortium to be responsive to regulations of the U.S.D.A. for submitting proposal and award documents.

Today, in our seventh year of operation, the Illinois Groundwater Consortium has produced findings (printed for public consumption as Proceedings of the annual conferences and as the Groundwater Bulletin) that provide information on the link between various pesticides and possible health risks, the movement and leaching of fertilizers and herbicides through gravel fill during normal and flood conditions, and chemical cleanup options, lowering water contamination through postemergent application of herbicides, the effectiveness of artificial wetlands in reducing fertilizer pollution, recommendations for protecting wells from contamination, and the successfulness of a community-based well-sampling program. This information is being disseminated to pertinent constituencies through incorporation into course materials, extension service activities, conferences, and publications. In addition, this information which is being acquired by scientists supported though this consortium is available in published form to researchers, agency personnel, and the public in other states, to help them in addressing issues pertaining to agriculturally-related impacts on groundwater quality.

Status of the Current Program

The Illinois Groundwater Consortium is currently in its seventh program year, and has recently been appropriated funds by Congress for a seventh year of funding at a level of $492,000. The goals of the research program currently underway are to provide information upon which public policy makers working on land use or groundwater protection issues in flood plain areas can base decisions. These goals were identified by Consortium researchers, the Consortium Advisory Committee, and constituents affected by flooding, through public hearings conducted by member of the Consortium. While the Consortium had intended to conclude its work after five funding years, the 1993 and 1995 midwest flooding of the Mississippi, Missouri, and Illinois Rivers, and their tributaries, created devastating effects on farm lands which have major implications for agricultural practices and water quality. This natural catastrophe has resulted in a need for further studies examining the impact of the flooding on surface/groundwater on agricultural land in the Midwest.

These flooding effects are not limited to Illinois, but affect seven other states in the Midwest. Thus, the Illinois Groundwater Consortium's research program has broad application, with both immediate and long-term economic implications for the Midwest. The Advisory Committee of the Illinois Groundwater Consortium, consisting of institutional representatives from each of the Consortium members and the Consortium Director (Dr. Victoria Molfese, SIUC) are currently overseeing the progress of 18 currently active projects. These projects are focusing on fate and transport of chemicals and nutrients; short-term and long-term impacts on groundwater quality; short-term and long-term biodiversity effects; historical impact of vegetation change on erosion; soil deposits and soil rehabilitation; economic impact of periodic flooding and recovery; and the effectiveness of riparian buffer strips under flooded conditions

Current Flood Studies.

The floods have provided unique opportunities to investigate a variety of economically important issues. It appears that the ecological system of the Mississippi flood plain has been changed dramatically because of: the loss of vegetative cover and topsoil; soil contamination due to fertilizer, herbicide, coliform bacteria, and heavy metal sediment; and movement of herbicides, fertilizers and other contaminants into surface and groundwater. Important questions need to be addressed which pertain to what the long-term effects will be; how to facilitate the recovery of agricultural areas; what the implications will be for agriculture, wildlife, and recreational lands; how recovery of farmland and town sites are affected by the geological conditions which underlie them; and how individual homeowner and farmer interests can be balanced in order to qualify for government loan insurance.

Some of the work needed to answer some of these questions is being addressed by using data obtained by Consortium researchers during normal condition to compare with data obtained during flooded conditions to examine fertilizer, herbicide and pesticide transport in alluvial aquifers, watersheds, and in the subsurface; changes in water quality in public water supply wells; changes in and recovery of vegetation in flooded regions, changes in aquatic ecosystems and soils; and studies of floodplain management and ecosystem management after the flooding. This work, which builds on previous work done by the Illinois Groundwater Consortium, has already begun to yield publication in prominent journals and magazines that inform the research community and the public of the Consortium's findings.

Additional work is being planned to address research needs that are within the Consortium's high priority research projects listed in the table below.

Illinois Groundwater Consortium
High Priority Research Areas

SHORT-TERM PROJECTS (RESULTS WITHIN THE NEXT 1 TO 2 YEARS)	LONG-TERM PROJECTS (RESULTS WITHIN 2-5 YEARS)
Movement of chemicals (pesticides, herbicides, heavy metal, other chemicals) in flooded soils	Changes in soil chemistry and productivity over time
Impacts on soil fertility and nutrient balance caused by flooding • Plans for soil rejuvenation and revegetation	Effectiveness of changes in tillage, fertilizer and pesticide applications and rates to determine rate or recovery • Expansion of areas surveyed in comparing flooded and non-flooded soils
Changes in nitrogen-fixing bacteria or pesticide microbic activity due to flooding. • Effects on microbic activity in mitigating harmful chemicals moving through surface deposits	Long term effects and recovery of microbic activity
Impacts of flooding on plant and aquatic life, including endangered and dangerous (e.g., zebra mussels), species, and microbial communities	Effects of time on recovery (and eradication) of plant and aquatic life • Record the succession of the microbial communities across time
Effects on ecological, economic and public policy bases of current watershed bottomland management practices	Recommendations for long-term, systems-based planning and management for watershed and bottomland management
Groundwater factors influencing community relocation decisions • The role of crucial geologic factors in decision making required as a result of flooding	Acceptability and implementation of relocation decisions by communities • Sequelae of the flood on children and youth
Effectiveness of riparian buffer strips under flooded conditions	Examination of public policy decisions with implications for agriculture and water quality in light of flooding effects and recovery

SHORT-TERM PROJECTS (RESULTS WITHIN THE NEXT 1 TO 2 YEARS)	LONG-TERM PROJECTS (RESULTS WITHIN 2-5 YEARS)
Groundwater quality changes resulting from flood related land-use developments in both the bottomlands where farming practices change and in the uplands where new communities are being developed	Long term implication for public policy decisions and management of the river systems

Farmers and other business persons are to be asked to provide direct input into their research needs through extension and outreach meetings in the affected communities.

We believe that these studies are important for the recovery planning for this region, and for developing long-term management plans on utilization of the flood plain lands that are of enormous economic value to agriculture. The Illinois Groundwater Consortium hopes to be a leader in providing information useful for facilitating short-term and long-term systems studies. It is hoped that the results found by Consortium researchers will be immediately useful to agricultural areas in other regions which are also seeking to recover from devastating flooding of productive agricultural lands.

On behalf of Southern Illinois University at Carbondale and the Illinois Groundwater Consortium, we wish to thank the Subcommittee for the opportunity to submit this testimony to you. The efforts of the Subcommittee have been responsible for what may be the finest consortial research effort on groundwater in the country. We truly believe that we can meaningfully contribute to the currently deficient body of knowledge on the impact of agricultural chemicals on groundwater, particularly in the Midwest, and we hope you will be able to allow us to continue our work during the seventh year of funding.

UNIVERSITY OF ILLINOIS

PREPARED STATEMENT OF DENNIS CAMPION, ILLINOIS COOPERATIVE EXTENSION SERVICE AND SUZY HOOD, I CARE

We thank you for your past support and urge you to continue funding of the "I CARE" program in Marion County, Illinois for FY 1997. I CARE is a group of concerned citizens making a concerted effort to assist those children in the Marion County communities who must deal with complex family problems, as well as negative academic and social behaviors on a daily basis. Since it was founded in 1983, I CARE has helped provide in-school counseling to many of Marion County's elementary and high school students. Before the FY 1995 appropriations there were 2.5 full-time certified counselors for the I CARE program. With nearly 5,300 students enrolled in sixteen rural schools, these counselors are hard-pressed to meet the needs of the students. Currently, there are two full-time certified counselors and 2 prevention counselors for the I CARE program serving students in the 10 participating schools. With the FY 1997 appropriations, I CARE is planning to increase the number of counselors to 4.5 FTE's to serve the schools. The increase in counselors would provide a more effective and beneficial program for the students.

The school systems often bear the brunt of our economic times and unsettled social conditions. Experience has shown that when a child is troubled by family difficulties, caught up in a self-destructive pattern of substance abuse, or preoccupied with personal concerns, he or she usually finds it difficult to pay attention in class and may become a discipline problem. I CARE's program allows that child to work through and solve his or her problems one-on-one with an in-school counselor.

Much of the effectiveness of the I CARE program can be attributed to the accessibility of services we provide. In a rural county where the population is spread over a large geographical area, and public transportation is virtually nonexistent, accessibility is a crucial consideration. The local schools provide convenient locations for the I CARE counselors to meet with students and their parents before, during, and after regular school hours. I CARE counselors are readily available and can respond almost immediately when a teacher or student has an urgent request. Continued federal appropriations of the I CARE program would ensure the much needed efforts of the 4.5 FTE I CARE counselors.

Your consideration of our request is greatly appreciated.

PREPARED STATEMENT OF PETER J. BARRY, DIRECTOR, CENTER FOR FARM AND RURAL BUSINESS FINANCE, ET AL.

We are pleased to offer this testimony on behalf of the *Center for Farm and Rural Business Finance*. The Center is a federally assisted initiative undertaken jointly by the Department of Agricultural and Consumer Economics at the University of Illinois and the Department of Agricultural Economics and Rural Sociology at the University of Arkansas. The actions of this Committee in supporting annual appropriations for FY 1992 through FY 1996 have made it possible to initiate and to carry forward the work of the Center over this period. We want to thank you, Chairman Cochran and members of the Committee, for your role in permitting this work to go forward.

In addition to federal funding for FY 1996, the Center is supported through the following funds:

- $246,000 in faculty-researcher salaries through the Illinois and Arkansas Agricultural Experiment Stations;
- $62,500 from National Research Initiative Competitive grants and projects;
- $188,000 from the state of Illinois; and
- $82,000 from private and finance industry sources.

To establish and institutionalize the Center, federal start-up funds of $900,000 were sought. Having received some $560,000 of that amount in special research grants in the preceding five years, an additional $340,000 in federal funding is now requested.

Background and Need. The Center was established as an ongoing response to the significant structural changes among the providers of financial capital for U.S. farm and rural businesses that began in the mid-1980s and continues through the 1990s. As concentration, consolidation and internationalization of financial markets have rapidly occurred, new and non-traditional capital providers have entered the market, structural changes between traditional banking and Farm Credit systems have prompted new strength but also uncertainty.

Vertical coordination and growing emphases on strategic alliances between farm and rural businesses carry strong financial and market implications for producers and integrators and their capital providers as well. As they strive to remain competitive in the rural capital markets, capital providers are also looking for partners in meeting capital and financial service needs of farm and non-farm rural businesses These are new and untried relationships between private and public entities and former private competitors as well

Now there is every indication that Congress will soon end major portions of farm commodity support systems that have been in place for decades. With this substantial lowering of the federal government's "safety net" for agriculture, there is probable increased volatility in the farming sector but also increased uncertainty within the farm and rural economies as their capital providers reexamine their commitments to rural capital uses.

Along with the inherent risks associated with the provision of capital to farm and rural sectors, these are the issues and developments which place a heightened premium on information and understanding of credit relationships and between the changing providers and users of essential capital in rural America In response, the Center exists to provide an ongoing and objective research and information base for decision-making by farm and rural businesses, their lenders, investors and policy makers

Performance. The work of the Center is directed to three separate areas of ongoing inquiry 1) Financial management and performance of farm and rural businesses; 2) Financial markets and credit institutions serving rural America, 3) Farm and rural business financial and credit policies and programs of the state and federal government.

Among its accomplishments for the past year, the Center has:

- Measured the effects of interstate banking on availability and cost of credit for agricultural producers with differing structural and demographic characteristics.
- Constructed an insurance risk simulation model to assist the Farm Credit System Insurance Corporation (FCSIC) in determining the adequacy of the statutorily targeted 2 percent "secure base amount" for the FCSIC insurance fund.
- Provided a comprehensive assessment of agricultural finance implications of proposed major modifications to and elimination of U.S. farm programs.
- Published the book *Food, Agriculture, and Rural Policy into the Twenty-First Century* as background components for the finance components of the then pending 1995 Farm Bill.
- Examined the effect of government program payments on U.S. farm enterprise diversification.
- Evaluated U.S farm financial policy with an emphasis on public credit programs, their costs and their effects on the farm sector.
- Assessed the impact of a changing regulatory environment on rural agricultural banks relative to other agricultural lenders.
- Analyzed Chapter 12 bankruptcy filing data to determine the success of the Chapter in meeting the needs of financially stressed farmers.
- Highlighted important agricultural finance issues and financial institutions serving rural America as a foundation for potential impacts of federal legislation.
- In anticipation of now enacted changes to the Federal Farm Mortgage Corporation ("Farmer Mac") authorities and capital standards, created a model to calculate the

guarantee rates associated with Farmer Mac loan pools with varying underwriting characteristics and effective subordinate positions.

- Examined the use, design and implications of Federal Export Credit Guarantee programs and the resulting exposure to the government from these programs.
- Evaluated credit rationing among limited resources farms in support of improved credit scoring methods to help resolve information and credit rationing problems for these borrowers and their lenders.
- Created a model to evaluate the effects of principal-agent relationships in agricultural lending on capital structure and investment.
- Evaluated Vertical Coordination and Financing Arrangements in Agriculture to enable better predictions of optimal governance structures for vertically coordinated arrangements in agriculture and agribusiness.
- Measured and explained differences in average annual interest rates on non real estate farm loans from commercial banks.
- Surveyed agribusiness firms in Illinois to determine the factors that influence expansion/contraction decisions including the implications of rigorous worker compensation laws in Illinois.

The National Symposium for Agricultural Finance Executives. Continuing as a major outreach program, in April of 1995, the Center hosted the Fourth Annual National Symposium for Agricultural Finance Executives. Recognizing the diverse and changing ways in which capital is provided to U.S. farm and rural businesses, the Symposium provides a unique forum for major decision makers involved with the financing of farm and rural business -- providers, users, scholars, and policy makers -- to consider and interact on strategic issues affecting the farm and rural business and those who provide capital to those businesses. The Fifth Annual Symposium, to occur in Chicago in April of 1996, will focus on the implications of "partnering" among farm and rural businesses and their capital providers.

Work in Progress. Continuing its work at each of the same three areas of inquiry, in FY 1997 the Center will target issues associated with Financing Strategies for Small Farm and Rural Development, the continuing effects of Banking Structure and Interstate Banking on Agricultural Finance and Rural Financial Markets, the Implications for Rural Credit Providers of a Changing Customer Base, Risk-Return and Financing Analysis of Independent versus Vertically Coordinated Hog Production, Firm Level Evaluation of Beginning Farmer Loan Programs, Optimal Capital Structure and Performance Objectives of Cooperatives, Education Program Needs for Rural Small Business Borrowers, Financial Structures of Agricultural Alliances, Financial Performance of Agribusiness Firms, Determinants of Farm Lease Type and Lease Terms, and Changes in Farm Financial Conditions from 1986 to 1996.

Resources. The Center draws primarily from the combined resources at the University of Illinois and Arkansas, each with a record of consistent leadership in agricultural and rural finance and in agricultural law. The work of the Center is carried out by a team of more than thirty faculty, academic professionals and graduate students at Illinois and Arkansas and involves scholars at no fewer than six additional institutions across the country.

Taken together with continuing increases in state, private and projects/grants funding, the requested federal funding will enable the Center to become more fully institutionalized. Among the center's three primary areas of ongoing inquiry, federal funding would be evenly applied and would be distributed between research and development, outreach and education, and administrative costs.

Endorsement The Center continues to enjoy a broad base of support with special assistance and active involvement of the Illinois and Arkansas Farm Bureau, AgriBank, FCB, St Paul, MN and the Farm Credit Association of Illinois and Arkansas. A complete list of groups and institutions that have given their endorsement to the Center is available upon request.

Summary Through the appropriated financial support of FY 1992 through FY 1996, the federal government has been a vital partner with state and private industry sources to establish and institutionalize the Center as a nationally known and respected program of ongoing research and education where issues of farm and rural business finance are involved. An appropriation of $340,000 is needed to complete the requisite $900,000 in federal assistance to establish the Center and its ongoing program of essential farm and rural business research and financial information

---

PREPARED STATEMENT OF JAMES J. STUKEL, PRESIDENT, UNIVERSITY OF ILLINOIS, ET AL.

Our testimony is on behalf of the federally funded project entitled "Studies to Reduce the Aflatoxin Problem in Corn." This research is being conducted by scientists at the University of Illinois Crop Sciences Department in collaboration with scientists at other institutions and agencies. We wish to thank you, Mr Cochran and others on the Committee, for appropriating $843,000 to date for this important research. We have promising results to report. We request an allocation of $180,000 in FY 1997 so we can move these promising results further toward fruition for U. S. corn producers and consumers

THE AFLATOXIN PROBLEM

Aflatoxin in corn grain is a very important problem. The toxin, a chemical compound, is often found if the fungus that makes it, *Aspergillus flavus*, is present on the grain. Aflatoxin problems occur primarily in years and areas of moisture stress, which means its occurrence is relatively unpredictable. According to our studies of sixty-five widely grown commercial corn hybrids, including normal corn, white corn, and food-grade corn, there is little or no *A. flavus* resistance in commonly grown hybrids. The inbred lines of corn widely used to produce these hybrids apparently lack resistance genes.

The toxin can form in the maturing grain before harvest and in stored grain if the moisture levels are too high. Due to the danger posed by aflatoxin, levels of the toxic compound are closely monitored in corn grain. If levels of aflatoxin are too high in a given sample, the grain represented by the sample cannot be sold in interstate commerce. While it is small relative to other costs incurred by aflatoxin, there also is a significant monitoring cost.

It is estimated that in any given year 5 to 30 percent of the nation's corn crop experiences severe moisture stress. Direct yield and quality losses caused by aflatoxin are $500 million. That loss accrues to producers. Loss estimates do not include the harmful health, social, and economic effects of aflatoxin when it is present in corn-based food products.

Aflatoxin is one of the most carcinogenic (cancer-causing) naturally occurring compounds. It is very detrimental to the health of humans or animals that ingest it. This makes it a very serious problem. For this reason, it is important to eliminate aflatoxin from corn grain. That is the mission of this project

THE STRATEGY FOR REMOVING AFLATOXIN FROM CORN

The strategy of the project is to: 1) through field tests, identify resistant germplasm in existing collections, 2) using tissue culture techniques, evaluate and select corn cultures that inhibit *A. flavus* growth and/or aflatoxin production, 3) regenerate promising plants for greenhouse and field evaluation, 4) using recombinant DNA techniques, introduce into corn antifungal genes encoding enzymes such as chitinase and B-glucanase, which may impart resistance to *A. flavus*, and 5) determine the effect of fungicides on *A. flavus* growth and aflatoxin production.

PROGRESS REPORT AND LOOK TO THE FUTURE

The complexity of the plant/fungus/environment relationship, an unusual amount of plant-to-plant and plot-to-plot variation in the field, and general susceptibility of widely grown corn hybrids make this a particularly challenging undertaking. Nevertheless, there are very promising developments to report.

Conventional breeding and selection approaches

Since 1991 we screened thousands of corn inbred lines, some of which already existed in various collections and some of which we derived from existing material. We now have identified 11 lines with high levels of resistance to *Aspergillus* ear rot and to the production of aflatoxin. We are concentrating on sources of resistance that can be used to improve inbred lines B73 and Mo17, from which most important commercially used inbred lines are derived.

In inheritance studies, we found that resistance genes have both additive and dominant affects. It is desirable for resistance genes to be dominant, so that when resistant and susceptible lines are crossed, the resulting hybrids will be as resistant as the resistant parent. Some of the resistance genes discovered are strongly dominant. We are concentrating considerable effort on the inbred line Tex6. This was selected from a southern white corn population that has high levels of resistance to southern corn leaf blight.

Tex6 confers extremely high levels of aflatoxin resistance when crossed with most of the inbreds that are important in the Cornbelt. Inheritance studies indicate that the resistance in Tex6 is controlled by just a few genes, which is very desirable. The fewer the genes controlling a trait, the easier it is to transfer that trait to other lines and the faster it can be transferred using traditional backcross corn breeding.

A major milestone was reached when, using Tex6 and other experimental lines and the backcrossing approach, we were able to transfer effective aflatoxin resistance into commercially used inbreds related to both B73 and Mo17. In yield trials this past summer, hybrids with some of these new aflatoxin resistance inbreds as one parent yielded as well as popular commercial hybrids. This is extremely important because unless resistant varieties yield as well as or better than normal varieties when aflatoxin is not a problem, they won't be acceptable to producers. This breakthrough paves the way for private firms to introduce resistance to *A. flavus* and aflatoxin production into their best lines.

Biotechnology research on aflatoxin

This year we discovered something particularly important about the genes that confer aflatoxin resistance. We used Restriction Fragment Length Polymorphism (RFLP) markers, a powerful biotechnology technique, to identify those chromosome regions associated with specific genes for aflatoxin resistance. We found that some genes confer resistance to the fungal disease organism (*Aspergillus flavus*) that causes ear rot. Some do not confer resistance to the fungal organism but do inhibit its production of toxin (aflatoxin). Some genes do both.

Recently, in cooperation with scientists at North Carolina State University, we identified a specific protein from seed of inbred Tex6 that inhibits aflatoxin production in culture but has very little effect on growth of the fungus. Apparently there is a corn gene that codes for this protein. It appears that this protein is at least partially responsible for reduced aflatoxin production. If we can identify and characterize this protein, we will be closer to a clear understanding of how one of the important resistance mechanisms works. Through a better understanding of that mechanism, we may be able to enhance its function

If the gene or genes that block aflatoxin synthesis can be incorporated into otherwise productive corn hybrids, several advantages will accrue. First, fewer genes will have to be transferred to achieve the desired result. This should speed up the process of incorporating desirable aflatoxin-reducing genes into commercially important hybrids. Since these aflatoxin synthesis-blocking corn genes will place little selection pressure on the fungus itself, the fungus will be less likely to develop ways to defeat the resistance mechanism

The resistant genes might be transferred to other crops, such as peanuts, that also have aflatoxin problems. Corn collections could be screened for the aflatoxin blocking protein using a fast chemical technique. This would dramatically speed the process of finding aflatoxin resistance in the corn genome. Corn lines identified in this project that are resistant to *A. flavus* also are resistant to *Fusarium moniliforme*, which produces fumonison, another highly toxic and carcinogenic mycotoxin.

We are still attempting to transform corn callus by shooting the chitinase and B-1,3-glucanase genes along with the promoters into corn cells using a particle gun. The transformed tissues are selected for a resistance marker also carried by the DNA. We have regenerated hundreds of plants. A few have apparently been transformed, but have not expressed the correct genes. One of the problems is the low rate of transformation of corn using the gene gun. The transformation experiments will continue this year with the chitinase and B-1,3 glucanase genes in order to produce plants expressing these antifungal enzymes in the kernels

We know that the chitinase gene is active, because we placed it into an easily transformed plant, tobacco, and saw expression. Since corn is very difficult to transform using genetic engineering techniques, this part of the study will require persistence. Even one successful transformation, however, could be very important in the control of aflatoxin and a number of other fungal problems.

We continue to have good cooperation with other institutions and USDA-ARS. Several sources of resistance we discovered and several resistant lines derived from them have been shown to be resistant in field studies conducted by cooperators in Mississippi and south Texas. We are also cooperating with scientists at Iowa State University, who found that the silks on our resistant lines inhibit growth of *A.flavus*

SUMMARY AND REQUEST

We believe this project is making excellent progress toward the desired outcome of reducing or eliminating aflatoxin as a serious problem in corn production and use. To summarize project results to date, we identified several corn lines that are resistant to the organism (*Aspergillus flavus)* that causes ear rot and produces aflatoxin. We also discovered lines that inhibit aflatoxin production without inhibiting fungal growth. This increases the possibility of inducing resistance that does not decrease with time

We derived new lines that have both types of resistance. We learned how aflatoxin resistance is inherited when crosses are made. We have sources of resistance that are effective when used in either the northern or southern Cornbelt. Biotechnology approaches revealed new possibilities for reducing or eliminating aflatoxin even in the presence of the causal organism. We now know it is practical to use tissue culture tests and DNA analysis to identify resistant germplasm. We are moving toward rapid, relatively simple tests. We have already shown that fungicides decrease *A. flavus* growth in stored grain Procedures for this are now awaiting approval by EPA. The project is generating a number of papers in scientific journals. The papers provide valuable information on both practical and basic science issues associated with aflatoxin.

We still need to screen more germplasm for resistance sources. Resistance genes tend to work for a while and then become less effective as the pests evolve new virulence mechanisms. We still have to broaden the base of inbred lines that will be used to introduce aflatoxin resistance into commercial varieties grown in the major corn growing regions of the nation. We must pursue further the possibility of using biotechnology to create an even more effective resistance mechanism than is found in the material developed so far Our goal is to insert new resistance genes that can be moved rapidly into commercially used inbreds and that are effective in reducing and eliminating other mycotoxins as well.

We respectfully request an allocation of $180,000 in federal funds for FY 1997 to continue this important project. This amount will allow us to maintain the momentum and productivity of this innovative aflatoxin research program and to capitalize on the progress made to date.

PREPARED STATEMENT OF JAMES J. STUKEL, PRESIDENT, UNIVERSITY OF ILLINOIS, ET AL.

Our testimony is on behalf of the federally funded project entitled the **Illinois-Missouri Alliance for Agricultural Biotechnology (IMBA)**. We thank you Mr. Cochran and distinguished members of the Committee, for your support to-date of this important project. A special grant of $1.3 million was provided to launch this effort in FY1995, and an additional $1.3 million was provided in FY1996. Considerable organizational groundwork was laid. An innovative management plan was developed, refined, approved by CSREES, and implemented. Several important research and development projects are underway. We are particularly pleased with the public/private alliance emerging to expedite each project. In order to assure continuity, we request that $1.5 million be appropriated to sustain the project in FY1997.

The mission of the IMBA is to increase the volume of profitable business in the U. S. food and agriculture sector by improving the diversity, quality, safety, affordability, and convenience of products and services marketed by the sector. The IMBA is accomplishing this mission by supporting cutting-edge biotechnology research conducted as part of strategically sound, competitively funded, research and development projects organized around clearly defined, practical objectives.

A steering committee made up of Roger Mitchell, Dean of the University of Missouri College of Agriculture, Food, and Natural Resources; Frank Stokes, Director of Policy and Planning, Monsanto Company; Jim McGuire, Dean of the Southern Illinois University College of Agriculture, and Don Holt, Director of Research, University of Illinois College of Agricultural, Consumer and Environmental Sciences, prepared the five-year management plan for IMBA. The proposed management plan is designed to create and coordinate a market-driven, mission-linked, practical-goal-focused research and development program involving public/private cooperation.

When the management plan was approved, the funds for the program were transferred to the Illinois Agricultural Experiment Station, which serves as the repository for the funds until they are dispersed within the program. To avoid spreading the IMBA research investment too thinly, we limited the subject matter scope of the program to the corn and soybean industries; geographical scope to Illinois, Missouri, and other Midwestern states; and disciplinary scope to biotechnology

The day-to-day operations of the IMBA research program are managed by a Program Manager, Dr Bruce Bullock, Professor of Agricultural Economics, University of Missouri, and former Director of the Missouri Agricultural Experiment Station. An executive Committee made up of Program Manager Bullock, Deans Mitchell and McGuire, CSREES administrator Glen Gray, and Director Holt oversee the program and approve all major expenditures of IMBA funds.

IMBA-funded biotechnology research grants are awarded on a competitive basis, based on relevance to IMBA objectives, strategic soundness, and scientific merit. Proposals are evaluated by both scientific peers and industry experts to assure that the best science and the best business strategies are brought to bear on agricultural problems and opportunities that are important to the region. The Program Manager works with the Executive Committee to design and develop a biotechnology research investment portfolio that addresses the following objectives.

1 Develop new and improved uses for corn and soybeans and products that can be manufactured profitably from them

2. Increase the value of corn and soybeans as a raw material for manufacturing food, feed, fiber, fuel, and chemical feedstocks.

3. Lower the unit cost of producing, processing, distributing, retailing, and utilizing corn, soybeans, and products manufactured from them.

4. Maximize positive effects and minimize negative effects of the corn and soybean industries on the environment

5. Conserve non-renewable resources consumed in the corn and soybean industries.

In designing the portfolio, the Executive Committee defines and seeks an appropriate balance among the above objectives, among projects with varying degrees of uncertainty and risk, and among objectives that can be achieved in relatively short and long periods of time. On the high risk side, provision is made for some funding of promising but unproven scientists with good ideas

The following IMBA-funded projects are underway. Each involves public/private cooperation to achieve a useful practical outcome. At this point it appears that public and private direct and in-kind matching contributions will exceed the IMBA investment by a factor of two or more.

1. Soybean varieties with increased total oil content and modified oil composition. Besides producing better varieties for soybean oil, this project will pave the way for creating varieties of soybeans that emulate the oil characteristics of competing oil crops. The goal is to help U. S producers gain differentiated positions in world oilseed markets. Cooperators include the University of Illinois and Monsanto. Negotiations are underway with ADM-Growmark, Clarkson Grain, and Cargill.

2. Recombinant baculovirus insecticide to control insect pests of corn. The goal is to commercialize a cost-effective, fast-acting, safe, and environmentally benign insecticide that effectively controls the worst pest of corn, the European corn borer, and related insects This will provide an important alternative to bt-based pest control approaches, anticipating that insects will eventually develop resistance to the bt toxin. Cooperators include Iowa State University and American Cyanimid, with negotiations underway with DuPont, Biosys, Zeneca Agrochemicals, and DowElanco.

3. Increasing specific amino acids in corn storage proteins via genetic engineering. The goal is to improve the nutritional quality of commercial corn hybrids for use in animal and human food The low protein quality of corn is a major deterrent to its wider use. The University of Missouri, lead institution on this project, is negotiating with Monsanto, Dow Elanco, and Ciba Geigy, which have expressed interest in this project. Pioneer and DuPont will be approached as well.

4. Genetic engineering of low phytic acid soybeans. The goal is to commercialize soybean varieties that are low in phytic acid, a relatively undigestible component that incurs great costs for phosphorus supplementation in human and animal diets and contributes greatly to phosphorus pollution of surface and ground water. Cooperators include the University of Missouri, University of Illinois, Pioneer, and Northrup-King

The IMBA Management Plan includes several innovations that differentiate the IMBA from other major public agricultural research grant programs.

1. Proposals are solicited and projects organized around desired practical outcomes rather than academic disciplines, as specified in the Government Performance and Results Act (GPRA) Success is measured in terms of achieving practical objectives

2. Only biotechnology research projects that are fully integrated into strategically sound research and development projects are funded. Participating institutions, agencies, and private firms are expected to share project costs through direct and in-kind contributions.
3. The program is operating in continuous, parallel mode rather than in a linear, stepwise approach. This approach should speed the R&D process while reducing cost.
4. Information technology is being employed to bring an exceptional level of communication and coordination to each project.

Because of the economically important subject matter being addressed by the Illinois-Missouri Biotechnology Alliance, the unique capabilities of participating institutions, and the innovative research management approach being employed, we believe the project will be unusually productive and will generate an unusually high return on the federal investment. This will more than justify the $2.6 million appropriated to date and the $1.5 million requested to continue the project in FY 1997.

PREPARED STATEMENT OF NAOMI B. LYNN, CHANCELLOR, UNIVERSITY OF ILLINOIS AT SPRINGFIELD AND NORMAN STEPHENS, PRESIDENT, LINCOLN LAND COMMUNITY COLLEGE

Lincoln Land Community College and the University of Illinois at Springfield have been engaged in a joint project, the Rural Education and Technology Center, in recognition of the educational and medical needs of rural Central Illinois and in making a commitment to meeting those needs through the application of distance learning and other advanced technologies.

The project includes the construction, equipping and operation of a new state-of-the-art learning and information center for colleges, schools, businesses and homes in rural Central Illinois The project will deliver education and training programs to hard-to-reach and historically under served rural residents and communities. The project will provide high quality services that will result in positive economic, educational, health-related and social development for the region.

The project will provide education and information through a computer-based interactive network for farm owners, rural businesses and homes. It will assist the small rural high schools to deliver comprehensive programs for their students. It will consolidate telecommunications systems among LLCC, UIS and other systems in order to deliver secondary and post-secondary distance learning programs cost-effectively throughout the immediate districts and throughout the state. It will provide expanded facilities for originating distance learning programs, for teleconferencing and for other educational services. And it will provide rural Illinois citizens with greater access to academic and training programs and necessary support services.

The Center will be located on the campus of LLCC, but in close proximity to UIS, whose campus is contiguous to LLCC. The facility will house programs and services from both institutions that relate to health education, continuing education, computer-based learning laboratories, interactive distance learning classrooms, agricultural programs and business development programs.

This is a unique joint community college-university project, cooperative in nature, technological in focus and it addresses a need in America's heartland-rural economic development.

Both LLCC and UIS have submitted an application to USDA for FY 1996 funding of the project Preliminary planning, including conceptual architectural drawings and site location selection, has begun, and additional support is necessary so the design and construction can proceed in an expeditious manner.

We urge you to continue support for the Rural Education Enterprise and the Medical Link grant programs and request that USDA give these programs a high priority.

PREPARED STATEMENT OF THE INTERNATIONAL APPLE INSTITUTE

On behalf of the apple industry of the United States, the International Apple Institute (IAI) appreciates the opportunity to provide comments on the appropriations for the U.S. Department of Agriculture (USDA) for fiscal year 1997.

Our focus is on three agencies of the Department: the Agricultural Research Service (ARS), the Foreign Agricultural Service (FAS), and the Animal and Plant Health Inspection Service (APHIS).

IAI is a non-profit national trade association representing all segments of the U.S. apple industry. Our membership includes 28 state organizations representing approximately 9,000 producers and over 650 individual firms which handle and market the bulk of the nation's apples. Apples are grown commercially in 35 states, with gross returns to growers last year totalling $1.4 billion. Top producing states include Washington, New York, Michigan, California, Pennsylvania, Virginia, and North Carolina.

The Agricultural Research Service

The apple industry appreciates very much the efforts of this Subcommittee to appropriate much needed funding for apple-specific research in high-priority areas that are of concern to the American public as well as the nation's apple growers. We also believe it has been extremely beneficial to have the apple industry's input provided to ARS as was directed by the Congress with regard to the apple-specific research funding appropriated to ARS. The apple industry believes that apple-specific research is an investment that produces extraordinary benefits for American consumers who benefit from the availability of an affordable and wholesome food. Research is also an essential ingredient in the apple industry's efforts to expand its level of exports and maintain its international competitiveness.

Today we are seeking the continuation of the $575,000 that has been allocated previously and are requesting additional funds of $100,000 to tackle remaining problems. These funds would be dedicated to solving two national research priorities that will benefit the American consumer and apple growers in the 35 states where apples are a commercial crop. Those priorities are the reduction in the use of pesticides and the improvement of postharvest technologies. The following information explains the recommendations made by IAI's Research Committee, whose members are industry experts from all areas of the country, to ARS to best utilize the monies appropriated by Congress for apple-specific research projects. The testimony also provides an overview of an apple industry initiative in partnership with the U.S. Environmental Protection Agency (EPA) in which research is the key to reducing pesticide use.

We also would like to express our opposition to proposals by ARS to eliminate any program or close any research location that may adversely affect the apple industry.

Pesticide Reduction Initiative

The apple industry continues to look for new approaches to the issue of pesticide use on the national apple crop. In December 1994, IAI announced a partnership with the U.S. Department of Agriculture and the U.S. Environmental Protection Agency to seek ways to reduce the risk and use of pesticides on apples. This voluntary effort will focus on the strategies that growers can use to produce apples in a more environmentally-sound manner and the steps that government agencies can take to support these efforts. Regional task forces of apple growers, researchers and extension professionals who are addressing these issues have identified research as an integral component in the future success of the initiative. Right now, few effective alternatives to pesticides currently exist and growers are reluctant to assume the risk that use of the currently available alternatives presents. Real breakthrough progress will be made only when better alternatives are available to growers. Those alternatives are developed through research.

The International Apple Institute is committed to the process of seeking solutions to this problem and requests that the Congress support this industry effort by funding the appropriate research.

Research Support to Reduce the Use of Pesticides and Improve Postharvest Technology

IAI's Research Committee maintains close ties with the ARS program staff and meets periodically to coordinate activities with them. The IAI Research Committee believes that current research funding is well placed in areas of high priority. Current projects are underway in Washington, California, New York, Michigan and Pennsylvania. All of the projects recommended for funding met the national priorities of reducing the use of pesticides and improving postharvest technology. The committee recommended that in New York, funds be allocated for disease control using microorganisms, and for projects to identify alternative ways to control storage scald and leafrollers. Researchers are exploring ways to use certain species of harmless fungi or yeast to fight harmful pathogens that cause diseases in apples. Success in this area would reduce the need for fungicides on the crop and in some postharvest circumstances. Leafrollers, like all insect species, are extremely adaptable. In New York, growers are no longer able to control them using conventional means which limit the use of pesticides. The leafroller project was funded to avoid further use of pesticides that would ruin the current IPM system for controlling mites.

The IAI Research Committee recommended several projects in Michigan. One project would develop a data base that will assist researchers in finding pesticide alternatives while another project will fine tune IPM tactics for Midwestern growers. One promising alternative to pesticides is the use of mating disruption as a means to control pests. Harmless sex attractants known as pheremones are used to confuse male moths of a certain pest species and prevent the successful mating of male and female moths. This allows apple growers to reduce populations of harmful insects without applying pesticides directly to the crop. The Research Committee recommended a mating disruption project for codling moth and leafroller species. A proposal on the reduction in the use of fungicides was also recommended for funding. This particular project will investigate the degree of disease susceptibility for numerous apple varieties and match the degree of vulnerability with certain fungicide recommendations. If successful, the research will allow growers to adjust the level of fungicides to the level of resistance.

In any given year, only 40 percent of the national apple crop is harvested and sold before Nov. 1. The remaining 60 percent of the apple crop is held in storage until consumers are able to utilize it later in the year. This situation places the consumer, the grower and the industry in a very precarious position when it comes to storage-related diseases. Growers can successfully weather hail storms and drought but still lose a significant portion of their crop to storage scald, molds, yeast and fungi after the crop has been put into storage. Consumers are also at risk of losing an affordable and wholesome fruit during a marketing period when few low cost alternatives are available.

Growers need additional postharvest research to solve two related problems - storage scald and storage rot and decay. Apple growers routinely apply a drench of Diphenylamine (DPA) before the apples are stored to control storage scald. A postharvest fungicide must be applied along with the DPA because the DPA drench is recirculated and eventually picks up pathogens from fruit bins and orchard debris that cause apples to rot. If a postharvest fungicide is not used each truck load of apples would be infected by the recirculated DPA drench that contains the pathogens that cause rot and decay.

Recent trends in agricultural chemical manufacturing and federal pesticide policy have caused a severe reduction in the number of postharvest fungicides that are available to apple growers. This problem has resulted in the use of a limited number of fungicides. Many common storage rots and molds now exhibit an alarming level of resistance to the few fungicides that are now available. *Nationally, the apple industry exports 24 percent of the fresh apple crop. Washington state exports one-third of its fresh production. An extended shelf-life is an absolute necessity for the international competitiveness of the apple industry. Storage rots and molds undermine any efforts for the industry to expand exports and improve its position as a world* *leader in apple production and marketing. In this case, research is a critical factor in maintaining a viable and expanding domestic industry.*

The development of controlled atmosphere storage in the 1940s allowed the industry to store apples for long periods in a state of dormancy providing virtual year-round availability of apples. This technology provided significant benefits for consumers who are now able to enjoy a healthy, low-cost fruit without seasonal constraints. Apple stored under these conditions, however, are prone to a physiological disorder known as storage scald which causes the skin of apples to turn brown. Growers control this disorder with Diphenylamine (DPA) and it must be applied along with a fungicide. No other treatment or strategy will control the disorder. One of the primary objectives of the industry is to find an alternative treatment to DPA. If an alternative control can be found, apple growers would be able to reduce or eliminate the use of DPA and eliminate the fungicide treatment as well.

The Research Committee recommended funding for several proposals that seek to improve postharvest technologies. Two projects were recommended for funding in Michigan to address the problem of storage scald on apples. The projects will develop diagnostic procedures to determine if a particular block of apples have the potential to develop scald and evaluate different combinations of carbon dioxide and oxygen and their effects on scald. The diagnostic procedure would alert growers to blocks of apples that are not prone to storage scald and eliminate the need to apply DPA prior to storage.

Two projects were also recommended for funding in California. One project will investigate the use of ultra-low levels of oxygen to control scald while the other will look for solutions to mucor rot and core rot on apples. Mucor and core rot are difficult diseases to detect based on the outward appearance of the fruit so it is difficult to cull in the packing process. As a result, consumers are more prone to discover the rot. This unappetizing experience discourages apple consumption which is a particular concern for the industry since California enters the market before other states and sets the tone for the market. In New York, another scald proposal was recommended for funding. This project will attempt to control scald through different time and temperature exposures. Slight warming of the temperature at critical periods could be effective in reducing the development of scald.

The Research Committee recommended that ARS fund a Pennsylvania proposal to reduce the use of pesticides. Mating disruption and an insect growth regulator will be used to control tufted apple bud moth. This project is particularly interesting because it addresses the issue of cross resistance. Many insects have shown a remarkable ability to develop resistance to insect growth regulators. This project will take a dual approach to tufted apple bud moth control using mating disruption and the insect growth regulator to prevent resistance development while accomplishing the goal of reducing the use of pesticides.

The Research Committee agreed that the fire blight research in Wenatchee, Washington, should continue as well. Fire blight control is a critical ongoing project for the apple industry with many implications. Favorable weather conditions cause fire blight to explode unexpectedly in susceptible orchards across the country. In an advanced state, fire blight can take orchards completely out of commercial production. Under this threat, growers have only one viable source of control, streptomycin. In some regions of the country resistance to streptomycin has eliminated this final option making research on alternative controls even more important. *Control of fire blight also presents commercial opportunity to apple growers who hope to export apples. Several countries, including Japan, have strict phytosanitary regulations that disqualify apples from orchards with fire blight. Other countries require burdensome treatment. Sufficient control of this disease would make the industry more competitive in world markets and save growers millions of dollars presently spent on fire blight inspection and sanitation procedures.*

The apple industry believes that phytosanitary and chemical residue issues have the potential to severely limit the level of future apple exports. Present trends and recent experiences have indicated that countries that want to restrict apple imports will increasingly *rely on phytosanitary and chemical residue issues to achieve that goal now that the Uruguay round has reduced man y tariff and quota barriers to trade. The apple industry requests that the Congress appropriate sufficient research funding that will directly address these problems.*

The Foreign Agricultural Service

Market Access Program

While a number of FAS activities are important to the apple industry, including information gathering and trade negotiations, and we value the expertise and efforts of the FAS employees, we want to place particular emphasis in this testimony on funding the Market Access Program (MAP) at $90 million. This program is consistent with the new international trade rules, helps small businesses, and is effective in promoting U.S. exports.

After nearly a decade of multinational trade negotiations in the Uruguay Round, the global agricultural community will now begin to implement substantial trade liberalizing policies. One of the few areas in which government policies can still affect agriculture is export promotion. We support a strong MAP, which is permissible under the new international trade rules.

We should also anticipate that other governments will focus their funding in this area which may pose new challenges to U.S. exporters of apples and other products. Foreign governments already spend approximately $500 million on export promotion and market development. The European Union spends more on wine export promotions ($89 million) than the United States spends on all agricultural promotions ($85.5 million).

Today over one-quarter of fresh U.S. apple production is exported as compared to about 10 percent a few years ago. The nearly $400 million value of U.S. apples that is exported annually has a widespread and beneficial effect on the local economies in America's production areas and throughout the distribution and transportation systems. According to USDA estimates, every $1 in export promotion funds translates into $16 in additional agricultural exports.

Through IAI's U.S. Apple Export Council, the apple industry in 13 states (California, Utah, Idaho, Colorado, Michigan, New York, Pennsylvania, Virginia, Connecticut, Massachusetts, New Hampshire, Vermont, and Maine) is a cooperator in MAP. When this effort began three years ago, it was unprecedented for apple growers, packer/shippers, and marketers in so many areas to work together to promote apple sales and exports. By joining forces and working with USDA, the apple industry is undertaking promotions that never would be possible without the program.

Over the last year, we promoted U.S. apples for the first time in Brazil, including the sampling of unique U.S. varieties in retail stores. Exports went from minimal levels to nearly 300,000 cartons in an early season marketing window. Brazil is now the top export destination for apples originating in three eastern states. A second but critical result from this expanded trade was a strengthening of the domestic market for fresh apples.

Staff Activities to Address Phytosanitary Trade Barriers

As trade disputes over import restrictions and negotiations over tariffs have resulted in liberalized trade policies around the world, it is abundantly clear to the U.S. apple industry that the barrier of choice in the '90s is phytosanitary (plant health) requirements. Both the Uruguay Round agreements and the North American Free Trade Agreement include provisions to address for the first time such measures if they serve as trade barriers and are not scientifically justified. If the successes of the past trade negotiations and export promotion efforts are to be fully realized, then trade must not be allowed to be halted due to unjustifiable phytosanitary barriers. *It is critical that U.S. representatives be actively involved in and sufficiently funded to represent U.S. interests in the new dispute settlement processes called for in both agreements.*

Animal and Plant Health Inspection Service

Staff Activities to Address Phytosanitary Trade Barriers

The services of the Animal and Plant Health Inspection Service (APHIS) are similarly vital in that this agency provides the technical expertise for and leads the bi- or multi- lateral discussions on phytosanitary problems. Sufficient funding to manage these responsibilities is extremely critical to the apple industry, and agriculture generally. If APHIS lacks sufficient funds or manpower to study, investigate, and lead such negotiations, competitive U.S. agricultural products will face tremendous unfair trade barriers. *There is an immediate need for APHIS to have sufficient resources devoted to the implementation of these new phytosanitary dispute settlement measures, and* work to ensure that phytosanitary requirements and treatments are based on science.

INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES

PREPARED STATEMENT OF R. MAX PETERSON, EXECUTIVE VICE PRESIDENT

NATURAL RESOURCE CONSERVATION SERVICE (NRCS)

The Natural Resource Conservation Service has immense responsibilities for implementing the conservation provisions of the 1985 Food Security Act (FSA), the 1990 Food, Agriculture, Conservation and Trade (FACT) Act, and the Federal Agricultural Improvement and Reform (FAIR) Act of 1996.

TECHNICAL ASSISTANCE

In addition to the existing technical assistance workload, increased technical assistance funds will be needed to implement additional provisions of the 1996 FAIR Act. For example, the Environmental Quality Incentive Program (EQIP), the Wetland Conservation Mitigation, Mitigation Banking, the Conservation Farm Option, the Grazing Lands Conservation Incentive, and the Farm Land Protection Program are all provisions requiring additional technical assistance from the Service for which there are no provisions in their present budget recommendations. The Association strongly urges that adequate technical assistance funding be provided for these additional responsibilities in order to ensure that maximum agricultural and natural resource benefits acrue from these programs.

STATE TECHNICAL COMMITTEES (STC)

The 1990 FACT Act required that State Technical Committees (STC) be established to facilitate interagency cooperation and coordination of technical guidelines for the conservation programs. Further, the USDA 1995 Reorganization Act specifically exempted the STC from the Federal Advisory Committee Act (FACA). The 1996 FAIR Act further added additional members to the STC. Federal-State coordination is an ongoing normal function which is required with or without a formal State Technical Committee. We strongly encourage the Chief of NRCS to ensure the immediate establishment of the State Technical Committees in each State with representation from the respective State fish and wildlife agency.

WETLAND DETERMINATION

We believe the need for wetland determination, certification, and mapping is great and urge NRCS to proceed as soon as possible, under the guidance of FAIR Act of 1996. The Association urges expeditious completion of the wetland determinations required to implement the Swampbuster provisions of the 1985 FSA, 1990 FACT Act, and the 1996 FAIR Act as well as the FAIR Act directed interagency cooperation, whereby NRCS assumed responsibility for wetland designation for Section 404 (Clean Water Act) purposes on farmland, including tree farms, rangelands, native pasture, and other private lands used to produce or support the production of livestock. The Association and individual states wish to continue to work with NRCS to help achieve these goals.

PL-566

The Association generally supports the $16 million increase for small watershed (PL-566) projects. The Association's support is based upon continued emphasis on updated watershed planning and management. Such efforts could utilize and expand upon existing PL-566 plans that will be examined in light of present day issues of wetland protection, water quality enhancement and fish and wildlife habitat. The greatest potential for these programs is for land treatment measures that retain the water on the land, improve infiltration, improve water quantity and quality, and provide fish and wildlife habitat. Structural and non-structural land treatment activities require state and local matching funds and are therefore leveraged to provide greater conservation benefits for each federal dollar spent while promoting valuable partnerships among states, local agencies, and other organizations.

WATERBANK

The Association is concerned that the very valuable Waterbank Program that protects 75 million acres of wetlands and associated uplands habitat has been lost under the 1996 FAIR Act. The present 75 million acres protected under Waterbank will not automatically qualify for the Wetlands Reserve Program (WRP) or the Conservation Reserve Program (CRP). The Association strongly urges the addition of $2 million in the budget to protect existing Waterbank contracts until they can be protected through WRP, CRP, or other mechanisms.

WETLAND RESERVE PROGRAM (WRP)

The primary objectives of the Wetlands Reserve Program are to protect, enhance and restore valued wetlands and improve wildlife and migratory bird habitat, by providing payments for long term and perpetual easements. The Association supports the Administration's proposal to increase the authorized level to $188 million for FY 1997, an increase of $111 million over the FY 1996 funding level. The Association continues to be concerned about the cumbersome, complicated procedures that have resulted in the very slow progress and high dropout rate for this program. NRCS should make no regulatory decision which would unduly restrict possible enrollment and should carefully examine regulations to see if they are hindering present program success. Factors motivating enrollees to drop out must be identified and remedied.

FOREST INCENTIVE PROGRAM (FIP)

The Forest Incentive Programs (FIP) has multiple resource values for fish, forests, wildlife, clean water and erosion control. The Association supports continued funding at the FY 1996 level.

NATIONAL NATURAL RESOURCES CONSERVATION FOUNDATION

The Association applauds the authorization of the Foundation and recommends initial funding of $1 million.

FARM SERVICE AGENCY (FSA)

An adequately funded budget for the FSA is essential to implement those conservation related programs and provisions under FSA administration as a result of passage of the Federal Agricultural Improvement and Reform (FAIR) Act of 1996. Since the FSA FY97 submitted budget does not reflect the changes resulting from the 1996 FAIR Act, our recommendations herein remain somewhat general in nature.

FSA programs have tremendous quantifiable impacts on natural resources, and yield substantial public as well as private benefits. Building on the provisions of the 1985 FSA, the 1990 FACT Act, and the 1996 FAIR Act, the Association wants to ensure that each program accomplishes the broadest possible range of natural resource objectives, and encourages close cooperation between FSA and NRCS in implementing the 1996 FAIR Act.

We compliment and support FSA's efforts to obtain funding to implement the CRP, the Floodplain Easement in the Emergency Watershed Protection Program, and the Flood Risk Reduction Program. The USDA and FSA commitment to those initiatives is well reflected in the 1997 budget. We recommend that FSA make every effort to ensure that language used in its easements and agreements provide a streamlined basis for appropriate administration and are user-friendly.

The continued administration of CRP under the guidelines of the 1996 FAIR Act is a very significant and valuable commitment of USDA and the FSA. The Association applauds FSA efforts to fund and extend CRP contracts for the multiple benefits that accrue to the public as well as the landowner.

COOPERATIVE STATE RESEARCH, EDUCATION AND EXTENSION SERVICE (CSREES) -- US DEPARTMENT OF AGRICULTURE

The Association recognizes that programs of the Cooperative State Research, Education and Extension Service (CSREES) effect positive changes in attitudes and implementation of new technologies by landowners, managers, community decision makers, and the public. This results in benefits to individuals and to the Nation through building and sustaining a more viable natural resource base and a competitive and profitable agriculture. Since over two-thirds of our lands, approximately 1.35 billion acres, are controlled by private landowners and managers, it is most appropriate that the CSREES, with its grass roots credibility and delivery system, be adequately funded to help the Nation's private landowners and managers use new technologies to move towards a more sustainable society.

We note that the President's FY 1997 budget requests continued level funding for Smith-Lever 3(b&c) funds at $268,493,000 and provided for a total of $423,488,000, including 3(d) items, which is a $4.262 million decrease from the FY 96 appropriation. IAFWA appreciates the Administration's continued support for Smith-Lever 3(b&c) base programs that provide "Block Grant" type funds for Land Grant Universities, providing educational outreach based on local needs assessment. However, we recommend a 4.0% increase for these programs; i.e., that Smith-Lever 3(b&c) funds be increased to $279,232,720, provided that not less than 35% of this increase be applied to Environmental Stewardship Education programs as part of Extension's Natural Resource and Environmental Management (NREM) Education programs. This will enable NREM programs to cope with inflation and to retain the capability to redirect limited funding to address critical emerging natural resource and environmental issues.

We support expanding Extension programs in natural resource public issues education on such critical issues as wetlands and endangered species, as well as to strengthen its programs in urban and community forestry and environmental education as called for in the 1990 FACT Act. We are concerned that the Administration is not requesting an increase for Water Quality education in 1997. This is an area of significant concern for the Nation, and it must receive increased attention.

IAFWA supports the CSREES and State programs in Environmental Stewardship Education and NREM programs and encourages continuation of close cooperation between State CES's and their State and Federal agencies and conservation groups. Extension 4-H Youth natural resource programs and projects continue to increase with over 1,300,000 youngsters presently enrolled from both urban and rural communities across the Nation. Increased funding will enable Extension to carry out its environmental education and NREM National Strategic Plan obligations nationwide.

The Association is disappointed, however, that the Administration did not support an FY 97 increase in the Renewable Resources Extension Act (RREA). The FY 96 funding increase was not adequate for the task at hand, and this program needs continuing support. The $500,000 increase for RREA in FY 94 and FY 95 to $3,341,000 has been judiciously targeted to ecosystem management as mandated. These funds have leveraged significant state and local level investment and currently enable 22 states to implement professional continuing education programs for natural resource professionals, to increase private landowners' understanding, and to implement new technologies for addressing landscape environmental problems. We regret that RREA funds for FY 97 were reduced from $3,341,000 in FY 95 to $3,291,000 in FY 97 and request restoration to previous funding levels.

IAFWA recommends that the Renewable Resources Extension Act be funded at a minimum level of $9.5 million in FY 97. RREA has been reauthorized to the year 2000. IAFWA supported and appreciated the $1 million increase proposed by the Administration for RREA in the investment proposals Section in FY 94, later reduced to $500,000 and sustained for FY 95. Even this small increase enabled 13 multi-state, regional, or national forest ecosystem management projects to be implemented. When apportioned to State Extension Services, these funds have been effectively leveraged with cooperating partnerships at an average of about three to one, with a focus on dissemination of educational programs to private landowners (rural and urban) and continuing education of professionals.

IAFWA notes that $15 million has been recommended in the President's budget for pest management and $3.411 million for sustainable agriculture. IAFWA recommends not less than 20% of the total appropriation for pest management and sustainable agriculture should be dedicated to vertebrate pests (wildlife damage management) educational programs, and to restoring, managing and sustaining the environment and the Nation's natural resource base upon which the agricultural economy depends.

The International Association therefore recommends an increase in funding for the Renewable Resources Extension Act to $9.5 million for 1997. We encourage review of the progress made in implementing the 1991-1995 RREA Plan, as mandated by Congress.

ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS)

The President's budget for the APHIS Animal Damage Control Operations is at the same level as FY 96, $26,642,000. For Methods Development the proposed amount is $10,591,000, a $926,000 increase over FY 96.

Animal Damage Control (ADC), a unit of APHIS, is the Federal agency responsible for controlling wildlife damage to agriculture, aquaculture, forest, range and other natural resources; for protecting public health and safety through control of wildlife-borne diseases; and wildlife control at airports. Its control activities are based on the principles of wildlife management and integrated damage management and are carried out cooperatively with State fish and wildlife agencies. Most APHIS operational work is cost shared between the Federal Animal Damage Control (ADC) program, State and county governments, agricultural producers, and other cooperators.

The cooperation and support of the agricultural community are essential to maintaining wildlife populations because much of the Nation's wildlife exists on private agricultural lands. A progressive animal damage control program which reduces the adverse impact of wildlife populations is necessary to maintain the support of the agrarian community and to counter increasing pressures for indemnity due to wildlife damage.

Over the 10-year period since Congress transferred ADC to USDA, the Association has worked closely with this program on numerous issues critical to the State fish and wildlife agencies such as the proposed fur ban by the European community. Also, the Association commends APHIS/ADC for its continuing effort to be attuned to the changing public values for the Nation's wildlife, while remaining responsive to the emerging wildlife problems.

Historically, Animal Damage Control has maintained an organization that has few administrative levels and has focused on a clear goal of customer service. (A recent survey shows a customer satisfaction rate of 93%.) However, the Association is concerned that APHIS/ADC is still underfunded and understaffed. ADC can be progressive, responsible, and successful only if adequately funded and staffed.

The Association has become aware of serious workload burdens and the continued requests from citizens and local governments who are willing to pay 100% of the cost of the control operations. We are also aware of the reduction in staff years irrespective of the funding source. Therefore, because of the entrepreneurial nature of this small program, the Association encourages the Congress to consider directing the Administration not to count the personnel who are fully funded by non-federal money toward the staff year reductions.

The Association is pleased the Administration's FY 1997 budget maintains the ADC's animal damage control operations at the FY 1996 level and provides a small increase to Methods Development. The Association recommends that Congress make a further increase to the development of methods because there is a growing need for new alternative control methods to cope with the increasing number and diversity of wildlife damage problems. Many of the current control tools are becoming less acceptable to the public. The only source of new methods is through research. The Association encourages Congress to commit to the discovery of new alternative approaches to solve these sensitive problems caused by wildlife and provide an increase of $3 million for development of alterative methods of control.

We commend Congress for recognizing the need for wildlife damage research when they appropriated funds to begin construction on what will become the National Wildlife Research Center at Ft. Collins, Colorado. The Association urges the Congress to appropriate the $14 million to complete this $37.7 million state-of-the-art facility.

The wolf population in the lower 48 states is growing at a rapid rate. The number of wolves in Minnesota has expanded to an estimated 2,000 animals ranging over 39,000 square miles. The natural growing number of wolves in Montana and Idaho has been augmented by the introduction of animals from Canada into Yellowstone National park and central Idaho. Plans are being made by the Fish and Wildlife Service to introduce the Mexican wolf back into New Mexico and Arizona. The Association recognizes the impacts of wolf recovery on the ADC program both from increase in the workload from the escalating amount of predation and the reduction in ADC's ability to provide damage protection to the livestock industry from other predators in the wolf recovery area because of the restrictions on control tools. We recommend that the Congress provide additional funding either through appropriation for the Endangered Species Act or directly to the ADC program. The Association supports $300,000 each for wolf depredation in the Greater Yellowstone area, $100,000 for New Mexico and Arizona, and an increase of $100,000 in Minnesota.

The Association is pleased with the accomplishments of the Berryman Institute at the Utah State University in Logan, Utah. However, the activities have seemed to reach a plateau, and we would like to see the Institute enhance its capabilities to conduct social science research, expand continuing education programs, and start a new high quality scientific journal for wildlife damage management that would be patterned after other established journals. To reach these new goals, the Association supports an increase of the funding to the Berryman Institute by an additional $236,000.

LIVESTOCK MARKETING ASSOCIATION

PREPARED STATEMENT OF LAVO BRISCO, PRESIDENT

The President has again requested in the FY 1997 budget that licensing fees be assessed on the regulated industries to fund the Packers and Stockyards (P&S) regulatory programs under the USDA's Grain Inspection, Packers and Stockyards Administration. The approximately 1200 members of the Livestock Marketing Association (LMA), which represents livestock auction markets and dealers throughout the country, vehemently opposes such a proposal and would appreciate our comments and concerns being made a part of the GIPSA appropriation hearing record.

The P&S user fee proposal, like its predecessors, gives little regard to who are the true beneficiaries of the P&S programs, the affect on the regulated industries and who will truly bear the cost of the program. Currently, livestock feeders are the largest marketers of slaughter animals in the United States but are not subject to the P&S Act and regulations. Imposing a licensing fee on one marketer of livestock and not another would unfairly discriminate against livestock markets and dealers, who are subject to the Act and regulations. Thus, until the law is amended to cover all marketers of livestock and there is clearer evidence that these fees are fairly assessed and provide a positive benefit, the subcommittee should withhold its approval of this proposal.

LMA, for several years, has urged the authorizing committees of the Congress to update the P&S Act of 1921 to bring it in line with current livestock industry practices. Thus, unless the Administration and the Congress is prepared to make those changes, the regulated industry should not be made to bear the cost of an inefficient, ineffective law and the agency which administers it.

Lastly, requiring the industry to cover the cost of administering and enforcing a regulatory program established by Federal mandate is a bit like asking the regulated industry to pay for the privilege of shooting themselves in the foot. If these fees were imposed on the industry, what incentive would the government have to control cost and why should we support even needed programmatic budget increases when it is us paying the bill.

The authorizing committees, which would have to amend the current law to permit P&S licensing fees, has yet to hold a hearing on this proposal. Therefore, we urge the subcommittee to reject the P&S appropriation funding proposal for user fees until hearings have been held to give those affected by the proposal a chance to be heard.

Your consideration of our concerns in this matter is most appreciated.

LUMMI INDIAN BUSINESS COUNCIL

PREPARED STATEMENT OF MERLE JEFFERSON, DIRECTOR, DEPARTMENT OF NATURAL RESOURCES

REQUEST: An appropriation increase for $241,360 to the Department of Agriculture's Rural Development Administration, Industrial Development Grant Program for the Lummi Nation to continue to supply oyster and clam seed to the Northwest Tribes in FY 1997, and continue to provide technical assistance to Tribal governments and the shellfish industry of the West Coast to revitalize shellfish production for economic development and employment purposes. This project request is supported by the Northwest Indian Fisheries Commission, the fisheries coordinating body for twenty Northwest Tribal governments in western Washington state, the State Departments of Fisheries and Health, and private commercial shellfish industry.

NORTHWEST TRIBAL CLAM AND OYSTER PROJECT

BACKGROUND:

Indian Tribes in Western Washington gathered shellfish on the Pacific Ocean for thousands of generations. Treaties between the United States and these Tribes, signed in the mid-1800's provided protection for the continued right of Tribes to these shellfish. In the following century, urban, forest, and agricultural development have seriously reduced shellfish resources and impinging on the treaty guaranteed rights. In late 1994, a US District Court decision upheld the Tribal right to shellfish resources and recognized the enhancement of the resource would be essential to the establishment of a meaningful right and also to protect the present private production of shellfish. In FY 1994, this subcommittee directed the Department of Agriculture to renovate and begin to operate a shellfish hatchery on the Lummi Indian Reservation at a level of production adequate to supply seed for enhancement of the resource by Tribal businesses on a regional basis. Congress further instructed the Department of Agriculture to assist in funding the operations in FY 1995 in order to move the Tribal enterprises towards self-sustainability. The Department of Agriculture has provided the grants, as directed, and the hatchery successfully produced 1.7 billion for distribution to the Northwest Tribes. However, due to the required architectural planning process, the hatchery production in 1995 was less than anticipated due to construction and the level of production was inadequate to meet the region-wide needs of the developing industry.

Within 15 years, fish farming and sea-ranching could provide nearly 40 percent of all fish for human diet and more than half the value of the global fish catch. Fish provides 28 percent of the total animal protein consumed in Asia and 7 percent in North America. It is the fastest growing segment of the seafood industry. By contrast, wild seafood harvest has either stabilized for many species or it is reduced. US demand for seafood has increased 26% in the past six years while the US is importing over 60 percent of its seafood supply at a $6 billion dollar deficit.

FY 1997 USDA APPROPRIATIONS PURPOSE:

The Western Washington Tribes, represented by the Northwest Indian Fisheries Commission, support a request by the Lummi Indian Nation for a Congressional add-on of $241,360 to the Department of Agriculture's Rural Development Administration to provide a portion of the cost of seed production to the Northwest Tribes. Although the overall hatchery production is a an adequate level to support its operation through non-tribal markets, the Tribal industry needs adequate time to grow seed to marketable size in order to generate equitable revenue for sustainable hatchery operations. It is essential that seed production to the Tribes continue during the period of grow-out to market size.

APPROACH:

The overall goal for the project is to develop a viable Tribal shellfish industry in Washington State. The approaches toward this goal are: (1) create a viable shellfish hatchery operation at the Lummi Nation to supply clam and oyster seed to the Tribes; and (2) disseminate seed and provide technical assistance to Northwest Tribes to aid in the development of the shellfish industry. Completion of the renovations to the hatchery accomplishes the initial stage of this plan. We are seeking continued support in FY 1997 to assist us in meeting the second level of the planned approach.

Project Component Costs:

EXPENSES:		
1.	Supplementation of Hatchery Operations Cost	$283,455
2.	Technical Support Services	$34,000
3.	Project Support (Indirect Costs)	$95,545
TOTAL EXPENSES:		$413,000
REVENUES		
1.	Congressional add-on request	$241,360
2.	Hatchery Revenue Contributions	$171,640
TOTAL REVENUES:		$413,000

Mr. Chairmen: We would like to commend the Department of Agriculture on the courtesy and professional handling of the 1994/1995 grants and especially the assistance of Ms. Laurel Andrew of the Puyallup, Washington office for her professional attitude and assistance.

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

PREPARED STATEMENT OF JOHN R. WODRASKA, GENERAL MANAGER

Fiscal Year 1997 Funding for the Department of Agriculture's Colorado River Salinity Control Program

I am writing to request your support for adequate federal funding for the Department of Agriculture's Colorado River Salinity Control Program (Program). The Program was authorized by Congress under the Colorado River Basin Salinity Control Act and the Clean Water Act. The Metropolitan Water District of Southern California (Metropolitan) is responsible for meeting the supplemental water requirements of 16 million people and the economy which supports them. In 1995, Colorado River water was used to meet the majority of these supplemental needs.

Metropolitan is concerned with maintaining the quality of this vital source of water supply. The President's proposed fiscal year 1997 budget provides line-item funding of $2.681 million for the Department of Agriculture's extremely cost-effective on-farm program. The Colorado River Board of California and the Colorado River Basin Salinity Control Forum, the interstate organization responsible for coordinating the Basin states' salinity control efforts, have recommended that $9.8 million be appropriated. A yet-to-be-determined amount of funding for technical assistance is proposed to be provided from the Conservation Operations account for the Natural Resources Conservation Service.

This level of funding is necessary to meet the on-farm salinity control activities schedule in order to maintain the water quality standards adopted by the seven Colorado River Basin states and approved by the Environmental Protection Agency. The Colorado River Basin states and farmers in the Uinta Basin of Utah, the Big Sandy area of Wyoming, and the Grand Valley, McElmo Creek, and Lower Gunnison areas of Colorado stand ready to pay their combined 51 percent share of the construction costs of this Program. In addition, investigation of salinity control measures in new areas depends upon the appropriation of adequate federal funding.

Metropolitan concurs with the recommended funding level of $9.8 million for the Department of Agriculture's cost-sharing activities, and supports adequate funding for Natural Resources Conservation Service technical assistance as well as information and education efforts. Your assistance and support in ensuring sufficient funding of the Colorado River Salinity Control Program for 1997 and beyond would be greatly appreciated by Metropolitan.

NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS AND NATIONAL ASSOCIATION OF STATE CONSERVATION AGENCIES

PREPARED STATEMENT OF ERNEST C. SHEA, EXECUTIVE VICE PRESIDENT, NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS

Mr. Chairman, members of the Subcommittee, I am Ernest C. Shea, Executive Vice President of the National Association of Conservation Districts, and I am here today on behalf of America's nearly 3,000 conservation districts. I am also representing the National Association of State Conservation Agencies. Thank you for the opportunity to appear before this subcommittee to share our views on the need for strengthening the federal commitment to natural resources conservation and management.

Conservation districts are local units of state government charged with carrying out programs for the protection and management of natural resources management at the local level. They work with nearly two-and-half million coöperating land owners and operators and provide assistance in managing and protecting more than half of the land in the contiguous United States. State conservation agencies are the state-level agencies, generally established under conservation district enabling legislation, that help organize conservation districts, coordinate their activities and provide financial and other assistance to support district programs. NASCA and NACD often cooperate on activities of mutual interest.

For nearly sixty years, conservation districts and state conservation agencies have worked in close partnership with U.S. Department of Agriculture agencies to provide technical and financial assistance to help farmers, ranchers and other land managers preserve and protect our land and water resources. This partnership has been carried out primarily with the Natural Resources Conservation Service (NRCS), but also involves other agencies such as the Consolidated Farm Services Agency and the Extension Service. The partnership bonds NRCS with local conservation districts, state conservation agencies, private land managers and others, and has evolved over the last half century to become a bond of trust between government conservation programs and the people they serve.

The United States is blessed with a cornucopia of natural resources - millions of acres of productive agricultural land, an abundance of fresh water and a rich diversity of forests and wildlife. These resources are the foundation of the prosperity we know and sometimes take for granted in this country. But, if we are to depend on those resources to maintain that prosperity we must manage them wisely for both present and future generations.

During the past three years, both the Congress and the Administration have been involved in extensive efforts to restructure USDA, streamline many of its agencies and strengthen its conservation and natural resources mission. Conservation districts and state conservation agencies strongly support these efforts and have been heavily involved in efforts to enhance the delivery of conservation services at the field level. We believe that, working together with state and local programs, USDA's restructured conservation programs now provide an even more effective network to deliver conservation services to those who are in the best position to care for our natural resources — local people who are working on the land.

The recently enacted "Federal Agriculture Improvement and Reform Act of 1996," better known as the Farm Bill, strengthened USDA's conservation mission even further. Title III of the act reauthorized and expanded existing conservation programs and created several new initiatives that significantly broaden the scope of the department's natural resource management responsibilities.

These new and expanded programs offer tremendous opportunities to build on past successes by providing additional incentives to help land managers make sound land-use decisions. Taking advantage of those opportunities, however, will hinge on the outcome of this year's budget debate.

In developing funding recommendations for specific agencies and programs, NACD and NASCA rely on input from members, discussions with program managers and estimates based on workloads mandated by federal, state and local program authorities. The numbers we recommend are based on what we believe to be the minimum levels necessary to address the most basic resource problems for which USDA and its state and local partners are responsible. Conservation districts and state conservation agencies devote enormous human and financial resources to help meet these conservation workload needs. As partners in these efforts, we recognize and accept our responsibilities. Our recommendations for USDA program funding reflect what we believe to be a fair share for the federal government to provide in helping protect, conserve and manage our precious natural resources.

Natural Resources Conservation Service

NACD and NASCA recommend a fiscal year 1997 budget for NRCS of $1.32 billion, an increase of $461.2 million over fiscal year 1996. The majority of this increase is accounted for by inflation and pay costs, as well as by funding for the new Environmental Quality Incentives Program (EQIP).

Conservation technical assistance is the cornerstone for most NRCS activities, supporting many programs activities such as the Farm Bill and state and local program priorities. The highest priority of the conservation partnership remains that of meeting the planning and technical assistance needs of farmers, ranchers and other land managers. Conservation compliance requires that NRCS devote a significant amount of its technical assistance resources to helping farmers and ranchers meet its erosion control requirements. Conservation cost-share programs, wetlands protection efforts and other programs such as the Wetlands Reserve and Conservation Reserve Programs also command considerable technical assistance resources from NRCS.

A number of other federal programs, as well as state and local programs, also target NRCS planning and technical assistance to carry out programs such as range and pasture management, mined-land reclamations, and other rural and agricultural land uses. Increasingly, NRCS is also being called on to share its expertise in addressing urban conservation problems such as erosion and sediment control, stormwater management, municipal waste management and other urban and community assistance needs.

To help meet these needs, NACD and NASCA recommend a total appropriation of $690 million for NRCS conservation technical assistance.

USDA reorganization has reduced the number of NRCS field offices and redirected personnel in some areas. In cases where the federal presence has been reduced, conservation districts have often stepped in to fill the gaps. NACD and NASCA recommend that, of the funds appropriated for conservation technical assistance, $50 million be transferred directly from NRCS to conservation districts to offset costs of implementing federal conservation programs and to support ongoing conservation initiatives at the local level. NACD and NASCA also recommend that $20 million of conservation technical assistance be allocated to fund NRCS conservation assistance in urban, suburban and rural communities.

The 1996 Farm Bill combined the functions of the four principal USDA conservation cost-share programs: the Agriculture Conservation Program; the Great Plains Conservation Program; the Water Quality Incentives Program; and the Colorado River Basin Salinity Control Program. The new program, the **Environmental Quality Incentives Program** (EQIP) now constitutes a broad, multi-purpose national conservation cost-share program. Both NACD and NASCA believe that NRCS, with assistance from conservation districts, should have the lead in administering EQIP. We also strongly support its full funding at $200 million per year.

The **Conservation Reserve Program** (CRP) and the **Wetlands Reserve Program** (WRP), enacted by the 1985 and 1990 Farm Bills, have been two of the most successful natural resource conservation programs in the nation's history. Historically, technical assistance needed to develop and implement CRP conservation plans and WRP wetlands restoration plans has been provided by the Natural Resources Conservation Service with funds appropriated for the two programs.

Under the 1996 Farm Bill, CRP, WRP and EQIP are funded through the Commodity Credit Corporation (CCC). In setting up EQIP, Congress included language in the Farm Bill providing that funds of the CCC could be used specifically for technical assistance to implement the program. Through what we believe was an oversight, similar language was not included when funding for CRP and WRP was transferred to the CCC.

Since Section 161(b)(2) of the 1996 Farm Bill essentially prohibits the use of CCC funds for administrative purposes, the failure to specifically provide for technical assistance under the enabling sections for CRP and WRP will seriously decrease NRCS technical assistance at the field level for both programs, and for other programs as well. Some estimates are that it will effectively decrease funding for NRCS technical assistance by $60 million.

A technical correction bill, if proposed in the next session, could remedy this potentially devastating shortfall in NRCS technical assistance. In the meantime, however, we urge the subcommittee to make it clear, either through statutory or report language, that Congress intends that Commodity Credit Corporation funds allocated for the Conservation Reserve Program and the Wetlands Reserve Program can be used to provide technical assistance for the programs.

NACD and NASCA strongly support the high priority work NRCS carries out with state and local governments through the **Watershed and Flood Prevention Operations** account (PL-566 and PL-534). We recommend a fiscal year 1997 appropriation for this account at $150 million. In considering this account, it must be recognized that federal funds going into these projects are only part of the investment. The local project sponsors in these "federally assisted" endeavors make tremendous investments also. NACD and NASCA also recommend $23.55 for **Watershed Surveys and Planning.**

To address the increasing need for conservation assistance for the nation's grazing lands, Congress established a new private grazing lands conservation program to be carried out through NRCS and local conservation districts. NACD and NASCA strongly support fully funding the **private grazing lands program** at $40 million.

The **Resource Conservation and Development (RC&D) Program** is an example of NRCS providing needed assistance to rural communities. Through resource management and rural development initiatives the RC&D program helps to revitalize economically disadvantaged rural areas. To support existing and needed RC&D areas, NACD and NASCA recommend a funding level of $38 million for fiscal year 1997.

The Wetlands Reserve Program (WRP) has been extremely popular and successful in recapturing important wetland acreage previously converted to agricultural use. Although we strongly support WRP as a model "landowner friendly" wetlands conservation program, we are concerned that the funding level proposed by the administration might detract from much needed technical assistance funding elsewhere in the USDA budget. NACD recommends WRP funding at $93.20 million for FY-1997 to enroll 100,000 additional acres in the program. This funding level would still allow for a significant expansion of the WRP.

NACD and NASCA also support funding for the Forestry Incentives Program at $6.62 million for fiscal 1977.

Additional line-item recommendations for NRCS program funding are contained in the attached funding chart. Footnotes are provided to explain the need for these appropriations.

Consolidated Farm Services Agency

The Conservation Reserve Program (CRP) has been perhaps the most successful conservation component of the Farm Bill. Since 1985, more than 36 million acres of sensitive croplands have been retired and put under protective cover. While not without its critics, the program's environmental benefits are virtually undisputed and the program enjoys strong public support. In order to maintain the CRP at current acreage levels NACD and NASCA recommend funding CRP at $1.8 billion dollars in fiscal year 1997.

Extension Programs

Several Extension Programs are significant in USDA's natural resource management delivery system. For example, activities under the Renewable Resources Extension Act provide educational assistance to help private landowners manage their lands to meet commodity demands and needs while, at the same time, providing for the many public values associated with the forests and rangelands of our nation. Although the actual funding need for this program is roughly $15 million, NACD recommends that at least $6.0 million be appropriated in fiscal 1997.

NACD also offers the following recommendations on selected line-items for Extension Programs:

- Earmarked Programs

$11.23 million for Groundwater Quality
$3.36 million for Pesticide Impact Assessments
$12.00 million for Integrated Pest Management

In addition, NACD recommends a five million dollar direct appropriation for Pesticide Applicator Training. In previous years, the Extension Service received a limited amount of pass-through funding from EPA to support this program.

As I noted earlier, attached to my statement is a chart showing line-item recommendations for selected programs within USDA.

We appreciate the opportunity to share our recommendations with the subcommittee.

PREPARED STATEMENT OF THE NATIONAL ASSOCIATION OF STATE FORESTERS

The National Association of State Foresters (NASF) represents the directors of the state forestry agencies from the fifty States and the U.S. Territories of American Samoa, Guam, Puerto Rico, the Virgin Islands, as well as the District of Columbia. Non-industrial private forest lands represent about 70 percent of this Nation's forest lands -- lands which are among the most productive in the country and provide well over half the wood products used annually. State Foresters provide private landowners with technical assistance to help them conserve and wisely use their forest resources in addition to providing assistance to protect forests from insects, diseases and wildfires.

NASF appreciates the opportunity to share its Fiscal Year 1997 budget recommendations on conservation and research programs that this subcommittee has funding jurisdiction over. NASF hopes the subcommittee will recognize the important contributions these programs make in terms of enhancing and protecting the long-term productivity of America's privately owned forests while providing other important benefits such as wildlife habitat, soil conservation and water quality.

There are several programs funded by this subcommittee assist State Foresters in carrying out our responsibilities. These include the Forestry Incentives, Rural Community Fire Protection, Renewable

Resources Extension, McIntire-Stennis Cooperative Forestry Research, Conservation Reserve and Agricultural Conservation programs. Specific recommendations on each of these programs follow.

Forestry Incentives Program(FIP)

NASF strongly supports continued funding for the Forestry Incentives Program (FIP) and stresses that the need for this program is higher now, perhaps, than ever before. Management on Federal forests has shifted away from intensive timber production at a time when demand for wood is unusually high. This demand has largely been shifted onto private lands, particularly in the southeast. The Forestry Incentives Program is needed to ensure that a significant backlog of reforestation needs does not develop.

State Foresters have successfully delivered FIP in partnership with the USDA for the past 20 years. Through cost-shared assistance, this program provides qualifying landowners with assistance in overcoming the substantial obstacles to reforestation, such as the high burden imposed by capital gains taxes on timber sales, high interest rates, the significant and extremely risky long-term commitment of cash that reforestation entails, and the almost complete lack of protection for such investments.

NASF stresses that FIP is unique in its emphasis on ensuring long-term timber supplies by helping to ensure that non-industrial private forest lands remain productive through reforestation and timber stand improvement treatments. This timber provides the basis for economic development in many rural areas. It is also important to note that the program does create a number of substantial benefits beyond timber supply, including long-term protection of water and soil quality and wildlife habitat. Approximately 141,194 acres were planted in trees under the Forestry Incentives Program in Fiscal Year 1995 and over 4,569,684 acres since it's inception. NASF supports funding of FIP at $10 million for Fiscal Year 1997.

Rural Community Fire Protection (RCFP)

Fire prevention and control is one of the core elements of nearly all State forestry programs. State Foresters have played a key role in the development of fire fighting capabilities of rural volunteer fire departments (RVFD's) and the Rural Community Fire Protection Program has been instrumental in these efforts. RCFP remains a high priority of the State Foresters. As the catastrophic fire events of the last several years demonstrate, the threat of severe wildfire exists throughout the country and the local, rural volunteer fire departments served by RCFP play a key role in assisting State Foresters and Federal agencies in combating these fires.

Through the program, rural volunteer fire departments receive direct financial assistance for training, equipment, and organization. A recent study showed that volunteer firefighters save this Nation over $36.8 billion annually. While the Rural Community Fire Protection Program can only provide assistance to a fraction of the 26,000 RVFD's in the country, it represents an important commitment to the cooperative relationships necessary to effectively combat wildland fires.

NASF wishes to highlight for the committee the policy recently adopted by the Federal firefighting agencies. This new policy envisions a significantly reduced role for federal firefighting forces in the area where wildlands and developed lands meet. This means fire departments in local areas will have to do more firefighting in this wildland urban interface area. It is imperative that the Federal government help defray some of the expenses that will be necessary as localities move to fill in the role that Federal firefighters have played over the past decades.

NASF supports restoring the funding for this important program to its historic level of $3.4 million in FY 1997 and encourages the Congress and the Administration to recognize the integral part this program plays in the overall effort to protect the nation's natural and other resources from wildfire.

Renewable Resources Extension Act (RREA)

The Renewable Resources Extension Act program helps support the Nation's need for continuous supplies of the forest resources, while protecting the health of the environment and ensuring long-term productivity. This program facilitates the transfer of needed forestry information and technology to private non-industrial forest landowners, as well as to industries and small businesses engaged in forest management. RREA provides education to the groups most actively involved in managing forest, range, and related lands. Educational efforts provided through such programs as the Logger Education to Advance Professionalism (LEAP) are a critical part of the effort to achieve sustainable, productive use of the nation's private forest lands.

Although the program continues to be funded significantly below it's authorized level, it has been very successful at leveraging funds from States and localities to promote range, wildlife, recreation and education programs. The NASF continues to support funding for this program at $4.0 million for Fiscal Year 1997.

Agricultural Conservation Program (ACP)

The Agricultural Conservation Program (ACP) is a proven, successful program, and NASF urges the subcommittee's continued support. The ACP provides cost-share assistance to landowners who implement practices which prevent soil erosion and protect water quality. Tree planting is an effective conservation practice that also enhances forest resources and provides wildlife habitat. Although tree planting represents a small portion of the overall ACP budget, substantial agricultural acreage's have been planted to trees, ensuring conservation of these acres from soil erosion and water quality degradation. Over 200,000 acres were planted in trees in FY 1995 and more than 6.5 million acres reforested under ACP altogether.

NASF also supports using ACP funding to implement the Great Plains Windbreak Renovation initiative, which seeks to renovate aging windbreaks in the 11 Great Plains states (Colorado, Iowa, Kansas, Minnesota, Montana, Nebraska, North Dakota, Oklahoma, South Dakota, Texas and Wyoming). This effort seeks to renovate some of the over 96,000 miles of field windbreaks which have proven themselves as part of the green infrastructure for sustainable agriculture.

Modeled after a three-year windbreak renovation pilot project in North Dakota, 8,578 miles of existing windbreaks would be targeted (under ACP practice SL7, Windbreak renovation and Establishment) at an estimated annual cost of $6.4 million over a five year period. This is an excellent opportunity to improve the working relationships between the State Foresters and NRCS State Conservationists.

NASF strongly supports a continuing level of appropriations for the ACP.

Conservation Reserve Program:

The Conservation Reserve Program (CRP) has been responsible for planting over 2.6 million acres of trees in the country since 1986 - more than either the Civilian Conservation Corps or Soil Bank Programs. The CRP has planted trees in 41 States, and in nine States, tree planting makes up 50 percent of all CRP plantings.

Experience has shown that acres planted to trees under conservation programs remain in trees long after the contractual obligations expire, providing conservation benefits like soil protection, water quality and wildlife habitat. For instance, 80 percent of the Soil Bank acres planted to trees in the 1950's remain in tree cover today.

The CRP has proven effective in reducing both soil erosion and in preventing unwanted surpluses of agricultural commodities. NASF supports continued funding and reauthorization of this program and urges the committee to encourage the Department to meet the tree planting goals of the CRP, which have lagged behind target levels.

Wetlands Reserve Program (WRP)

NASF supports wetland restoration and conservation. While we have no position on the WRP budget, we are concerned that the large requests for this program are coming at the expense of other proven programs which can confer many of the same conservation benefits. NASF questions whether Federal, permanent easements are necessary to protect wetlands. Further, State Foresters are concerned that regulations to implement the program have been written in such restrictive terms as to rule out nearly all management activities on lands placed under easement, especially activities like forest management which are widely known to be compatible with wetland hydrology and which will provide landowners with economic opportunities. Although much of the land enrolled in WRP is likely to return to forest cover over time, without management these lands may never have much, if any, commercial value. The forestry community has largely been excluded from the development and implementation of the program at both the Federal and State levels. NASF is working to alter this situation.

Cooperative Forestry Research (McIntire/Stennis)

The NASF supports continuing funding levels for Cooperative Forestry Research through the McIntire/Stennis program. This complements the National Research Council's study "Forest Research: A Mandate for Change" which recommends strengthening and enhancing current forestry research programs throughout the country. NASF has worked closely with other partners from the forestry community to develop and implement a cooperative effort known as the Forestry Research Initiative. As part of this initiative, university funding would be largely directed to problems of State, local and private ownership. As noted above, these ownerships are increasingly being called upon to supply wood products as harvests decline on other ownerships.

University based research is an important part of the collaborative research effort involving federal state and industry scientists; it is critical to the creation of new technologies designed to increase the efficiency and productivity of forest management. Cooperative (McIntire/Stennis) Research funding provides assistance on a matching basis to land grant colleges, agricultural experiment stations and other public colleges and universities offering forestry education. These unique partnerships bring together scientists from many disciplines and has contributed greatly to the productivity and health of our Nation's forests.

NASF supports funding for the McIntire/Stennis program at $23.0 million in FY 1997. This level of funding will ensure the continued effectiveness of this program in strengthening the role of research in the effective, multiple-use management of the nation's forest resources.

National Research Initiative

The competitive grants program funded through the National Research Initiative (NRI) of the USDA has become an increasingly important program for forest scientists. The NRI awards grants on a competitive basis, aiming to tap into the opportunities presented by modern biological, environmental and engineering sciences to address critical problems in agriculture and forestry. Research activities funded through this program will improve our understanding of how forestry and agriculture can better manage our resources and protect the environment. These funds provide a stable and long-term applied research program that is able to address specific forest science issues and concerns.

NASF recommends that the National Research Initiative be funded at $113.5 million for Fiscal Year 1997, with at least 20 percent of these funds directed towards Natural Resource Management research.

Agriculture Appropriations
Forestry Related Programs
($ in millions)

	Final FY 95	Final FY 96	Admin. FY 1997	NASF FY 97
Rural Com. Fire Protection (RCFP)	3.4	2.0	2.0	3.4
Renewable Resources Extension (RREA)	3.34	3.3	3.3	4.0
Forestry Incentives Program	6.6	6.3	6.3	10.0
Agriculture Conservation Program (ACP)	100.0	75.0	75.0	75.0
Conservation Reserve Program (CRP)	1.7 bil	1.8 bil	1.9 b	1.8 bil
McStennis (Coop. Forestry Research)	20.8	20.5	20.5	23.0
National Research Initiative	103.1	96.7	130.0	113.5*

** NASF recommends that at least twenty percent of NRI appropriated funds be directed towards Natural Resources Management research.*

NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND-GRANT COLLEGES

PREPARED STATEMENT OF DR. CHARLES B. BROWNING, CHAIR, FISCAL YEAR 1997 COMMITTEE

INTRODUCTION

Mr. Chairman and members of the Subcommittee. I am Charles Browning, Dean of the College of Agricultural Sciences and Natural Resources at Oklahoma State University. I am presently serving as chair of the FY 1997 budget committee of the NASULGC Board on Agriculture. I appreciate the opportunity to come before you to speak on behalf of the land-grant system for continued federal investment in the teaching, research and extension programs at our institutions. Before I present our priorities and budget recommendations for FY 1997, I would like to comment briefly on the remarkable federal/state/local partnership that is the driving force of the land-grant system.

FROM VISION TO REALITY - A DURABLE, RESPONSIVE AND ACCOUNTABLE SYSTEM

A bold new federal and state partnership was begun on July 2, 1862, when President Abraham Lincoln signed visionary legislation to provide grants of land to states for the endowment, support and maintenance of colleges of agriculture and mechanical arts.

This bold step was followed in 1887 by the Hatch Act which created the State Agricultural Experiment Station system and in 1914 by the Smith-Lever Act which set up the State Cooperative Extension Service.

Thus, the federal/state/local partnership that we now know as the **land-grant system** was established to provide all Americans access to teaching, research and extension. The system is dependent for its effectiveness on the unique partnership of the federal government with state and local governments. I would add here that the system was enhanced in 1890 when Congress passed legislation to endow seventeen predominately black colleges and, more recently, in 1994, when Congress added twenty-nine Native American colleges to the land-grant family.

That unique partnership created by those nineteenth century visionaries has demonstrated its lasting value and it promises continued effectiveness far into the next century. Throughout its existence, the system has been responsive and efficient and has demonstrated the ability over the years to adapt to ever-changing social, economic and demographic changes. Brilliantly, the founders of this great integrated partnership concept envisioned the merits of distinct levels of funding and authority which assure that no single entity is able to exert undue influence on the others, yet all can influence the development of program priorities and direction. As a result, regional and national interests are addressed as well as those that are state and site specific. This unique sharing of funding and decision-making within the structure of the federal/state/local partnership facilitates further partnering with literally thousands of organizations - state and local government agencies, the business sector, private and voluntary organizations, commodity groups, farmers, ranchers and on and on. And through this extensive set of integrated relationships, the system takes on an added richness of having "real people" participating in a continuing democratic exercise of decision-making, program planning and delivery that creates a feeling of ownership and great civic pride in the enterprise and its accomplishments.

Another key benefit of this democratic participatory concept has to do with **accountability**. From the simplest to the most complex partnership design, a variety of concerned participants are involved to insure that projects meet clientele needs in accordance with mutually formulated work plans and projected outcomes. The land-grant system has an excellent history of accountability, engendering public trust and confidence.

THE ULTIMATE BENEFICIARY OF OUR SUCCESS IS EVERY AMERICAN CITIZEN

Thanks in part to America's public investment in the federal/state partnership programs of education, research, and extension, agriculture is one of this nation's greatest success stories; the return on that public investment and the resulting benefits to the American consumer have been remarkable.

Every year, U.S. consumers save approximately $200 billion, because they pay 2.3 times less for food and fiber than they would have if technology had halted at 1950 levels. The U.S. food supply is the safest and most affordable on the planet.

There is a measured rate of return in the overall investment in research, education and extension of between 30 and 50 percent, depending on location and commodity.

The social changes accrued by the American public are no less important. Cooperative Extension nutrition education has assisted thousands of low income families to improve their diet and health, thereby saving millions of dollars in health care.

4-H is the largest youth-serving, nonformal educational program in the nation, reaching 5.5 million young people across the nation -- rural, small town, suburban and urban settings -- and across all racial, ethnic and economic groups.

American agriculture's protection of our environment and natural resources is no less important. Agricultural technology has reduced by 393 million acres the prime farmland required to meet the nation's needs for food production.

Technology, along with improved farming practices, has also reduced soil erosion by a factor of six over erosion rates of the 1930s.

And, a too-often forgotten fact is the extent to which the American food and agriculture sector contributes to the nation's wealth.

- Output has doubled since 1950 to over one trillion dollars, which represents 16 percent of the national economy and the industry accounts for 11 percent of the total value added segment of the U.S. economy.

- The industry accounts for over 23 million jobs or almost 20 percent of the total workforce.

THE PARTNERSHIP AND U.S. AGRICULTURE IN THE GLOBAL MARKETPLACE

Through its positive trade balance, the U.S. agricultural sector significantly helps to offset the large U.S. non-agricultural trade deficit. In addition, agricultural exports stimulate further income and growth in the domestic economy outside the agricultural sector.

However, the competitive position that the U.S. now holds in international markets is a concern. Growth of the U.S agricultural sector has fallen behind that of other nations. The dominance the U.S. once enjoyed as an abundant supplier of low-cost commodities may no longer hold true. Other countries have begun to catch up and in some cases surpass U.S. agricultural productivity growth in certain areas and the result is a weaker competitive position. In fact, the global share of U.S. agricultural exports has slipped in the past ten years.

As we approach full implementation of international free trade agreements such as GATT and NAFTA, continued growth in the U.S. agricultural sector is vital to maintaining a strong competitive position in the global marketplace. Without expanded research and development efforts, the U.S. may continue to sacrifice its position in global markets and profitability in the total agriculture sector. The U.S. should not allow this to happen.

If the agricultural sector of the economy is not competitive in the global market, we will lose our ability to provide the most inexpensive and safe food supply the world has ever known. We will be subject to food and fiber from countries with their standards, not ours. We will lose diversity, food safety will always be at risk and costs will rapidly escalate. We will be vulnerable to shortages and our life style will change as a proportionately larger amount of our disposable income would be directed to food, clothing and other consumables attributable to agriculture.

The responsive, adaptable and efficient integrated partnerships which have served domestic agriculture so well for decades must now be expanded and enhanced in order to assist U.S. agriculture in sustaining its international competitiveness and to ensure significant future gains.

FY 1997 BUDGET PRIORITIES

This is the rationale behind the FY 1997 NASULGC budget priorities for agricultural research, extension and higher education. These priorities were identified through a process of nationwide consultation within the land-grant community and mirror the national priorities established by the Joint Council on Food and Agricultural Sciences.

The two over-arching priorities that define our FY 1997 budget recommendations are:

1. **Strengthen Base Programs for Research, Extension and Higher Education**

Base funds for research are appropriated under Hatch, McIntire-Stennis, Evans Allen and Animal Health legislation; extension base funds are appropriated under Smith-Lever 3b and 3c, D.C. Extension and 1890 Colleges and Tuskegee Extension Acts.

These funds provide for the essential continuing support of the infrastructure within which long-and short-term projects and programs can be conducted efficiently. Specifically, base funds:

- Assure that a stable resource base of personnel and facilities is in place in every state and territory to anticipate and deal with short-and long-term societal concerns

- Provide for the flexibility needed to respond to changing needs and priorities

- Provide initial capacity to focus on contemporary priority issues on the national agenda

- Undergird a system for the continuing education of youth and adults and for the delivery of knowledge and technology to consumers

- Provide networking capabilities to enhance communications nationwide and within regions

- Provide highly cost-effective leveraging of significant state, county and private sector support

Erosion of base funds over the past two decades has impaired the ability of the system to meet critical state and national research and extension needs. Major redirection of these funds to focus on contemporary issues already has occurred at most land-grant universities. Many universities have been forced to reduce their faculty and extension staff at a time when the needs for science-based research and extension have escalated dramatically. Reversal of this erosion in base funding is essential to maintain the basic infrastructure for research and extension.

An increase of four percent in base funds for research, extension and education is needed to offset anticipated inflation in FY 1996 and to help rebuild capacity after nearly a 20 percent decline in real funding levels since 1980 .

2. Advance Special Initiatives in Support of the Food, Agriculture and Environmental System

Even during times of fiscal restraint, public investments are needed to assure the continuation of a dynamic food, agriculture and environmental system of research, extension and instruction which anticipates information needs on a global scale while maintaining a sound base from which to respond.

Assessing need and changing focus require special research and extension initiatives such as the National Research Initiative and programs on water quality, youth-at-risk, food safety and sustainable agriculture. Base funding sustains the infrastructure of information, expertise and facilities from which new initiatives emanate, but each requires funding to advance a competitive U.S. agriculture, food and environmental system.

These initiatives are undertaken through individually-funded programs which address priorities for FY 1996 as established by the Joint Council on Food and Agricultural Sciences. These five important national priorities emphasize:

- Enhancing human potential
- Conserving the environment, agriculture and natural resources
- Addressing social and economic changes in America
- Improving U.S. food, forestry and natural resource competitiveness
- Assuring health, good nutrition and safe food

We recognize the serious budget restrictions faced by the Congress this year and we have tried to be reasonable in our request. We do feel, however, that several high-priority areas deserve special attention because of their impact on **contemporary societal concerns and U.S. competitiveness in global agriculture.** The high-priority areas include:

- Alternatives to Pesticide and Critical Issues
- Pest Management strategies
- 1890 Capacity Building
- Youth and Families at Risk
- Sustainable Agriculture
- Water Quality
- Food Safety and Health
- Native American Education in Agriculture and Natural Resources

CONCLUSION

Mr. Chairman, distinguished citizens representing all phases of the land-grant system have worked diligently to prepare what we feel are reasonable yet effective budget recommendations for FY 1997. They address critical national priorities and provide solutions to important problems in agricultural production, environmental and natural resource stewardship and rural social and economic welfare and the global competitiveness of U.S. agriculture.

Mr. Chairman, we appreciate the opportunity to present this budget and its rationale on behalf of the Board on Agriculture of NASULGC. I respectfully request that you accept for the record our Science and Education budget recommendations for FY 1997 which are attached to my statement.

I hope that you will agree to this request.

Thank you.

SUMMARY OF FUNDING RECOMMENDATIONS FOR RESEARCH, ETENSION, HIGHER EDUCATION, AND INTERNATIONAL AGRICULTURE

(IN THOUSANDS OF DOLLARS)

	FY96 CONF	FY97 President REQUEST	FY97 NASULGC RECOMMEND
BASE PROGRAMS			
Research	222,017	222,017	231,630
Extension	293,583	293,583	306,206
Higher Ed	0	0	0
TOTAL	515,600	515,600	537,836
SPECIAL PROGRAMS			
Research			
NRI	96,735	130,000	113,500
Special Grants	20,177	30,337	35,501
Spec. Prob. Reg/State Grants	29,669	0	0
Other Rsch. Grants	14,289	13,789	15,789
TOTAL	160,870	174,126	164,790
Extension			
National Priorities	26,764	26,764	28,764
Specified Programs	95,194	97,456	104,835
TOTAL	121,958	124,220	133,599
Higher Education			
Natl Needs Grants	24,100	25,600	28,750
TOTAL	24,100	25,600	28,750
Federal Administration			
Net Research	10,337	1,993	9,537
Net Extension	12,209	5,685	5,102
TOTAL	22,546	7,678	14,639
Summary			
Total Rsch.	393,224	398,136	405,957
Total Ext.	427,750	423,488	444,907
Total Higher Ed.	24,100	25,600	28,750
GRAND TOTAL	**845,074**	**847,244**	**879,614**

TABLE 1: RESEARCH FUNDS

	FY96 CONF	FY97 President REQUEST	FY97 NASULGC RECOMMEND
Base Programs			
Hatch Act	168,734	168,734	175,500
McIntire-Stennis	20,497	20,497	21,500
Evans-Allen (1890)	27,735	27,735	28,927
Animal Health	5,051	5,051	5,703
TOTAL BASE PROGRAMS	222,017	222,017	231,630
Research Grants -- P. L. 89-106			
Competitive Grants (Sec.2b) (NRI)			
Plant Sys.	37,000	47,000	39,000
Animal Sys.	23,750	29,500	25,500
Nutrtion, Food Qual., & Health	7,400	11,000	10,000
Nat. Res. & Environ.	17,650	27,000	22,000
Eng. Proc. & Value Added	6,935	9,000	9,000
Rural Dev., Mar., & Trade	4,000	6,500	8,000
SUBTOTAL	96,735	130,000	113,500
SPECIAL RESEARCH GRANTS (Sec. 2C)			
National Programs			
Food Safety/ Ani. Health & Safety	0	0	2,500
Energy Bio./ Biofuels	0	0	0
Pest Control Strategies			
Alt. to Pest. & Crit. Issues	2,000	4,700	3,000
Int. Pest. Mgt./ Biocontrol	2,731	8,000	6,000
Pest. Clear.	5,711	10,711	7,000
Pest. Imp. Assess.	1,327	1,327	1,327
Minor Use Ani. Drugs	550	550	550
Bio. Impact Assess.	254	254	200
Rural Dev. Centers	423	423	1,000
Trop./Sub-trop.	2,809	0	2,809
Water Qual.	2,757	2,757	5,000
Global Change	1,615	1,615	1,615
Strengthening the Rural Workforce	0	0	500
Rural Econ. & Social Dev.	0	0	1,000
Soil Quality Initiative	0	0	3,000
SUBTOTAL NATL SPEC. GRANTS	20,177	30,337	35,501
SUBTOTAL REG./ STATE SPEC. Grants	29,669	0	0
TOTAL SPEC. GRANTS	49,846	30,337	35,501
GRAND TOTAL RSCH GRANTS	146,581	160,337	149,001
Other Research Grants			
Rangeland	475	475	1,475
Aquaculture Centers	4,000	4,000	4,000
Supple. & Alt. Crops	650	650	650

TABLE 1: RESEARCH FUNDS, CONTINUED

	FY96 CONF	FY97 President REQUEST	FY97 NASULGC RECOMMEND
Low-Input Ag.	8,100	8,100	8,100
1890 Centers of Ecellence	0	0	1,000
Crit. Materials	500	0	0
Pacific Rim Program	564	564	564
Internatl Rsch.	0	0	0
TOTAL OTHER RSCH. PROGS.	14,289	13,789	15,789
Federal Administration			
Direct	20,101	11,757	20,101
1890 Cap. Bldg. Grants	(9,200)	(9,200)	(10,000)
Pacific Rim Program	(564)	(564)	(564)
NET FED. ADM.	10,337	1,993	9,537
GRAND TOTAL RESEARCH	**393,224**	**398,136**	**405,957**

TABLE 2: EXTENSION FUNDS

Base Programs			
Smith-Lever	268,493	268,493	280,038
1890 Colleges & Tuskegee	25,090	25,090	26,168
TOTAL	293,583	293,583	306,206
National Priorities			
Water Qual.	11,065	11,065	11,065
Food Safety & Quality	2,438	2,438	2,438
Sustainable Ag Systems	3,411	3,411	4,411
Youth & Families at Risk	9,850	9,850	10,850
Intnat'l Ext.	0	0	0
TOTAL	26,764	26,764	28,764
Specified Programs			
EFNEP	60,510	60,510	60,510
Rural Dev. Ctrs/ Comm. in Transition	936	936	936
Int. Pest Mgt.	10,783	15,000	15,096
Pest. Impact Assessment	3,313	3,313	0
Farm Safety/ AgrAbility	2,943	988	2,943
Res. Et. Agents	1,724	1,724	1,724
1890 Ext. & Research Facilities	7,782	7,782	7,782
RREA	3,291	3,291	3,432
Ag Telecomm.	1,203	1,203	1,203
Rural Health & Safety Ed.	2,709	2,709	2,709
1862/1994 Inst. Comp. Coop. Agreement	0	0	2,500
Managing Change In Agriculture	0	0	5,000
TOTAL	95,194	97,456	104,835
Federal Administration			
Direct	12,209	5,685	5,102
Net Fed. Adm.	12,209	5,685	5,102
GRAND TOTAL EXTENSION	**427,750**	**423,488**	**444,907**

TABLE 3: HIGHER EDUCATION

	FY96 CONF	FY97 President REQUEST	FY97 NASULGC RECOMMEND
National Needs Competitive Grants			
Inst. Challenge Grants	4,350	4,350	5,000
Mult. Schol. Program	1,000	1,000	2,000
1890 Cap. Bldg. Grants	9,200	9,200	10,000
Hispanic Ed. Partnership Grants	0	1,500	0
Native American Endowment Fund	4,600	4,600	4,600
1994 Inst. Cap. Building	0	0	1,700
1994 Inst. Gen. Support	1,450	1,450	1,450
Grad. Training Fellowships	3,500	3,500	4,000
TOTAL	24,100	25,600	28,750
GRAND TOTAL HIGHER ED	24,100	25,600	28,750

PREPARED STATEMENT OF DR. MILO J. SHULT, VICE PRESIDENT FOR AGRICULTURE, UNIVERSITY OF ARKANSAS SYSTEM

EXPERIMENT STATION COMMITTEE ON ORGANIZATION AND POLICY (ESCOP)

CONGRESSIONAL TESTIMONY
FY-97 RESEARCH

The State Agricultural Experiment Station System, representing fifty-nine State and Territorial Experiment Stations, sixty-three Schools and Colleges of Forestry, seventeen 1890 Land Grant Institutions and Tuskegee University, twenty-seven Colleges of Veterinary Medicine and forty-two Schools and Colleges of Home Economics, is appreciative of the opportunity to present this testimony for the FY 97 Budget Committee of the Board on Agriculture of the National Association of State Universities and Land Grant Colleges.

The FY97 budget request for research was developed with great sensitivity to the fiscal constraints being felt at the national level while, at the same time, focusing on the responsibilities of the state partners to assist and support the food and fiber systems of the nation. These systems face challenges unparalled in our nation's history. The realities of NAFTA and GATT coupled with proposed changes in farm programs are creating an environment of revolutionary, not evolutionary, change in American agriculture. The products of research, including new and innovative technologies, are needed more than ever before. These research products must reduce economic and environmental risks, improve competitiveness in the international marketplace, develop ways to add value to raw agricultural products, maintain and enhance a safe and nutritious food supply, and increase that food supply to meet the demands of our ever-increasing human population around the world.

We have limited our request for increases in funding to a few critical areas, held many program requests at the FY 96 funding levels and reduced or even eliminated some programs which, while important, may be addressed in other ways.

The FY 97 request for research is for an overall 3.2% increase above FY96 funding levels with the following critical areas targeted for increases.

- -Base Programs
- -The National Research Initiative
- -Pest Management Control Strategies (IPM) with a focus on:
    - -Alternatives to Pesticides and Critical Issues
    - -IPM/Biocontrol
    - -Pesticide Clearance
- -Soil Quality Initiative

Our budget request targets an increase in base programs at about 4 0 percent. Base programs form the foundation on which all of our research efforts are built. This priority has broad-based support from the customers of the system and the research conducted under these programs undergoes review by scientists and administrators. And very importantly, the research priorities are determined based on input from customers at the local, state and national level.

The National Research Initiative continues to be a high priority as we ask for your support in reaching the authorization level of funding. In recognition of fiscal restraints, our request this year is below the request level of FY96. There is a modest recommended increase in order to reinforce the critical nature of this research.

We request increases in the Pest Management Control Strategies categories to support the USDA IPM initiative that has as its goal farmer implemented IPM methods on 75 percent of total crop acreage by the year 2000. These programs identify the Land Grant university system, both research and extension, as major entities in the development and implementation of this program. IPM places emphasis at the regional and local levels with major involvement of producers and private industry to set the priorities for research and technology transfer.

We request support for a new research initiative on Soil Quality at a level of $3.0 million. This initiative is proposed in support of efforts toward whole farm and ecosystem level planning. Understanding of the role of soil in forest, range and pasture, crop and wetland ecosystems is critical in the development of management plans on these lands. Currently, resources are not available to conduct the needed research.

This budget was developed with our USDA partners and reflects recommendations of a system-wide joint planning effort. The research planning process, leading to the development of the research budget, involved more than 200 "Customer Input Groups" including commodity and farm organizations, professional and scientific societies, institutes, foundations and councils (both public and private), and policy makers. Research partners included USDA/Cooperative State Research, Extension and Education Service, USDA/Agricultural Research Service, Schools and Colleges of Veterinary Medicine, Forestry and Home Economics.

The Federal/State partnership through the combination of research programs in this budget proposal, when coupled with state and non-federal support, continues to provide the flexibility to address a wide array of issues and has resulted in the high rate of return on public investment in agricultural research, ranging from 30 to 65 percent. These data are based on independent studies of return on investment in agricultural research and development. Research programs of the Agricultural Experiment Station System perform approximately 68 percent of all public funded agricultural research in support of the $600 billion agricultural industry. The federal investment represented in this budget is leveraged by approximately $1.5 billion in state and non-federal funds.

Thank you for the opportunity to provide this testimony on behalf of the Board on Agriculture of the National Association of State Universities and Land Grant Colleges. The 107-year partnership of state and federal research, along with the support of Congress, will continue to meet the challenges of the future and create opportunities for agriculture. I strongly encourage you to consider and adopt this budget recommendation. Your continued support is appreciated and we are committed to continue playing a major role in sustaining a strong agriculture for the benefit of all citizens of this country and people of the world.

PREPARED STATEMENT OF DR. HIRAM D. PALMERTREE, DIRECTOR, COOPERATIVE EXTENSION SERVICE, MISSISSIPPI STATE UNIVERSITY

Mr. Chairman, I am Hiram D. Palmertree, director of the Cooperative Extension Service at the Mississippi State University. My testimony represents all state directors and 1890 administrators of Cooperative Extension in the United States as the chair of their 1997 Budget Committee.

The Cooperative Extension System has a rather extensive and intensive process for program priority setting. The budget I present today has been through this same scrutiny. Our budget development committee is comprised of representatives from the four regions of the country, as well as representation from the 1890 institutions. Each line item in this budget was carefully examined.

We have, at times in the past, asked for increases in virtually every line item of our budget. Understanding the fiscal climate in which we make this budget presentation, we have limited our requests for increases to a few key critical areas. However, based on the fiscal problems in many states, reductions in the Extension budget at the federal level are not apt to be offset by state, county or private funding partners. These partners now provide over seventy percent of the Extension System's annual budget across the nation. Thus, each federal dollar is very important because it leverages several more dollars from state, local, and private sources and serves as the "glue" of this unique partnership.

The Smith-Lever Act of 1914 states the purpose of Extension is to "... provide instruction and practical demonstrations in agriculture, home economics, and related subjects." Our mission remains the same—to help people improve their lives through an educational process that focuses scientific knowledge on issues and needs.

Congress has been supportive as the Extension System has focused on seven base programs and eight targeted national initiatives within these base programs. We have focused on issues based on local citizen input as well as nationally identified issues—issues which require a solid research base and applied education. We have strengthened our resolve and commitment not only to agriculture, but to the entire food and fiber system while maintaining strong programs in "...home economics and related subjects."

The highest priority for the Cooperative Extension System is a four percent increase in the funding for base programs. In addition, this budget request includes added support in two of the eight national priority initiatives, two of the twelve specified programs, and two new initiatives: Managing Change in Agriculture and 1862/1994 Institution Extension Programs. We are also recommending funding for two programs be eliminated.

BASE PROGRAMS

Smith-Lever 3(b)(c): These base funds, along with matching state and local funds, provide the nucleus for maintaining the scientific and community-based network which is critical to the implementation of base programs and the national initiatives. This network empowers the faculty and staff of 74 land-grant universities and represents an intellectual resource unmatched by any other country of the world. In addition, nearly three million trained volunteers work with the Cooperative Extension System in areas such as health, nutrition, gardening, financial planning and youth development. Access to research-based education and information enables agricultural producers, agribusiness leaders, community leaders, and citizens at-large to make better decisions, in order to compete in an increasingly competitive global market place. No other system has the capabilities of reaching citizens in some 3,150 counties in the United States.

Mr. Chairman, we are asking for a four percent increase in Smith-Lever 3(b) and (c) and for the 1890 colleges and Tuskegee. Included in the 3(b) and (c) are funds for the legislatively prescribed University of the District of Columbia. This increase will help to maintain a strong base for Extension programming across the country and provide the base funding to undergird the national initiatives such as Integrated Pest Management and Youth and Families at Risk.

1890 Colleges and Tuskegee University: These institutions maintain base programs geared to the needs of culturally diverse audiences, especially those limited in selected economic as well as social resources. Funds provided these institutions have helped them prioritize highly essential educational initiatives focused on families, community leadership, small scale farms and youth, especially pregnant teen programs. These programs are designed to address new directions for what has become a large audience of people at risk and generally out of the mainstream of society. This four percent increase for the 1890's would enhance programming capabilities in key areas.

NATIONAL PRIORITY INITIATIVES

The current high priority for national initiatives of Water Quality, Food Safety and Quality, Sustainable Agriculture, and Youth and Families at Risk, need to continue to receive priority emphasis. However, increases are not requested for Water Quality or Food Safety. Increases are requested for two programs: Youth and Families at Risk and Sustainable Agriculture.

Sustainable Agriculture: Legislation in the 1990 Farm Bill requires that all agricultural agents be trained in sustainable farming practices and that all new agricultural agents be trained within 18 months of employment. Training will also be provided to field personnel of the Natural Resources Conservation Service and Consolidated Farm Service Agency. This training is underway, however, sustainable programming needs a modest increase in order to deal with the whole farm integrated management systems and strategies. These programs are to be coordinated, where applicable, with the Low-Input Sustainable Agriculture (Section 1621), Integrated Management Systems (Section 1627), Integrated Pest Management (Section 1650), Water Quality and Nutrient Management Research (Section 1484), and other appropriate programs. We request an increase of $1.0 million, for a total of $4,411,000, to continue this work.

Youth and Families at Risk: Land-grant universities have developed the finest system of non-formal education for young people. The system uses preventive educational programs to help youth and families become healthy, productive, financially secure, and responsible members of their community. Extension has built linkages and networks with many agencies that provide services to children and families. Currently, 49 states and six territories conducted Youth-at-Risk programs. The federal Youth-at-Risk appropriation of $10 million leverages an additional $43 million and captures the support of nearly 37,000 volunteers for its programs. We request that the $9.85 million appropriation be increased to $10.85, so this important work of salvaging and rebuilding human capital may reach more youth and families.

SPECIFIED PROGRAMS

Mr. Chairman, programs that our committee recommends for level funding are:

Farm Safety/Agrability	$2,943,000
Rural Development Center	$936,000
Agricultural Telecommunications	$1,203,000
Rural Health and Safety Education	$2,709,000
Reservation Extension Agents	$1,724,000
1890 Extension and Research Facilities	$7,782,000

Three programs are recommended for increase: a significant increase for Integrated Pest Management and a very modest increase for Renewable Resources and Expanded Food and Nutrition Education.

Integrated Pest Management: We request that funding be increased for Integrated Pest Management (IPM) from $10.783 million to $15.096 million. Pesticide use in agriculture, as well as in urban America, continues to be a major public issue. IPM programs set the stage for innovative crop protection programs that meet economic and environmental needs. Additional resources are needed if the goal of establishing effective IPM practices on 75 percent of the crop land is to be achieved by the year 2000. The increase will address this concern and supports the Department of Agriculture's initiative. To help accommodate this requested increase, we have recommended funding for Pesticide Impact Assessment be eliminated.

Renewable Resources: We request that the Renewable Resources Extension Act funding be increased from the current level of $3.341 million to $3.432 million. Public forests and rangelands now emphasize production of non-commodity values and commodity production has decreased. Concurrently, federal requirements for environmental protection on private lands have increased (Endangered Species Act, Wetlands Protection). Private landowners are, therefore, challenged to provide both increased commodity output to meet the nation's needs and increased environmental protection. Intensive management of non-industrial private forests for greater profitability, commodity resource output and environmental protection will be enhanced by this expanded educational effort. The impact on currently declining rural communities will be positive. This request could be funded as part of the 1980 Renewable Resources Extension Act with a $15 million authorization.

Expanded Food and Nutrition Education Program (EFNEP): We request that EFNEP funding be increased from the current level of $60,510 to $61,510. The EFNEP program is functioning in 725 sites and in all 50 states. Within these sites, last year the program provided intensive nutrition education for nearly 200,000 family household heads. These adults represented about 735,000 family members. In addition, the EFNEP program involved over 425,000 youth in special nutrition education programs, primarily during the months when the school systems were in summer recess. These various educational experiences for youth and adults are provided primarily by persons indigenous to the program sites, persons well trained in basic nutrition education and teaching skills and kept current by university nutrition professionals. It is also important to note that all of the 725 sites function in cooperation with the various nutrition and feeding programs of the U.S. Department of Agriculture and the state and local youth and adult public assistance programs.

NEW PROGRAM INITIATIVES

Funding is requested for two new program initiatives: Managing Change in Agriculture and 1862/1994 Institution Extension Programs:

Managing Change in Agriculture: addresses how the Cooperative Extension System can assist the U.S. agricultural sector in managing the changes that are impacting the sector in the 1990's. These changes include public concerns and expectations for production and processing of safe food at reasonable prices, while protecting the environment; rapid technological advances; accelerated industrialization of agriculture; globalization of markets; and declining governmental "safety nets."

Within the agricultural sector, the forces of change are causing significant shifts in how business is done. These include: structural integration of input suppliers, producers and processors through increased use of contracts, alliances and other linkages; more product specificity driven by consumer tastes and preferences, and technological advances in the distribution and retailing of food and fiber products; industrialization of additional commodity areas including vegetables and pork, with the expectation that this trend will spread; and the rise of a new class of entrepreneurs who focus on the assembly and distribution of inputs and products without being centrally involved in the production processes.

It will be increasingly important to recognize that a social contract exists between the agricultural sector and society, where the sector is supported by society, governed by producers and where alliances exist among producers, agribusiness, consumers and environmentalists.

The Cooperative Extension System, in concert with the agricultural private sector, will provide the leadership for the initiative. Funding will be sought from three sources: $5.0 million through your committee, Mr. Chairman, with matching funds from the state government and private sector. This will leverage the initiative into a $15 million plus program.

1862/1994 Institution Extension Programs: Improving America's School Act of 1994 authorized funding for Cooperative Extension programs to be administered by the 1862 Land Grant-Colleges through cooperative agreements with the 1994 Land-Grant Institutions. The purpose is to provide Extension programs in agriculture, home economics and youth development for the residents of the Indian reservations served by the 29 Tribal Colleges designated as 1994 Institutions. The requested $2.5 million for FY 97, which is one half of the authorized amount, would be allocated on the basis of a competitive application process. The cooperative agreement arrangement set forth in the authorization will help ensure the best use of the knowledge bases of the 1862 and 1994 institutions to develop meaningful programs and utilize the existing infrastructure of the Cooperative Extension Service in each of these states. The leadership of the 1994 Institutions have clearly identified the need for extension programs as a high priority to address the multitude of agriculture, family economics and youth development issues confronting the Native Americans. This program will be an excellent complement to the higher education resident instruction program in each of these 1994 Institutions.

PROGRAM FUNDING ELIMINATION

We recommend funding for the Pesticide Impact Assessment program, a program that has been federally funded for several years, be eliminated for FY 1997. This program has been streamlined and mainlined into the Extension Service's agricultural program operations.

Finally, it is recommended the federal administration line item be reduced from the FY 1996 appropriated level of $12.2 million to $5.1 million. This would eliminate specifically targeted programs yet retain the needed funding for federal administration of all the programs in this budget request.

Mr. Chairman and Members of the Committee, let me assure you that the Cooperative Extension System is mindful of the significant economic, technological, and societal changes happening in our nation. Thus, we have redirected programs to better serve the needs of agriculture and rural America, to address directly the growing needs of children and families facing difficult situations, and to help communities work for a better future. We have focused on issues of national importance, identified at the grass roots level. We very much appreciate your support and continue to keep our base programs strong and to continue to invest in initiatives of national importance.

We thank you for this opportunity to present our budget proposal for FY 1997.

PREPARED STATEMENT OF DR. PAUL D. HUMMER, ASSOCIATE DEAN OF ACADEMIC PROGRAMS, OKLAHOMA STATE UNIVERSITY

Mr. Chairman, members and staff of the Subcommittee, I appreciate the opportunity to address the important issue of science education in the United States and the 1997 budget for the USDA. Few issues are of more importance to the well being of our country and the future of our food and agriculture system.

Over the last five years, three White House reports from two presidential administrations have called for more emphasis by federal agencies on undergraduate education and K through twelve science education. In 1992, under the leadership of President Bush, the Federal Coordinating Council for Science, Engineering, and Technology (FCCSET), and the President's Council of Advisors on Science and Technology (PCAST) issued their reports dealing with the relationship of the federal government to research-intensive universities.

The PCAST report recommended that, "Federal agencies should ensure that their programs encourage universities to reemphasize education rather than discourage them." The FCCSET report noted that, "Federal agencies should examine the impact of federal research support on university undergraduate and graduate education and identify strategies to ensure against unintentional degradation of the educational mission and excellence of the research-intensive universities."

Federal agency involvement with higher education is especially critical to American agriculture. The great size of the American food and agricultural system and its very favorable competitive position in the world economy is due in large measure to our ability to substitute scientific knowledge for natural resources and labor. Theodore Schultz, using agriculture as his model, won the Nobel Prize in economics for demonstrating that the return on human capital was much higher than the return on physical capital.

This year the Board on Agriculture Budget Committee of the National Association of State Universities and Land-Grant Colleges carefully constructed a list of priorities for funding of USDA programs in research, education, and extension. Preeminent in this list was the **Higher Education Challenge Grants Program** administered by the Science and Education Resources Development unit of the Cooperative State Research, Education, and Extension Service.

- This program is a matching program, generating dollar-for-dollar non-federal funds, thereby doubling the federal investment.
- It is a highly competitive program, assuring only the most appropriate, highest quality projects will receive funding.
- It supports innovative and model projects that can and are transferred to other campuses throughout the system.
- It promotes partnerships among universities and colleges as well as with private industry.
- It promotes faculty development in order to be better able to serve student educational needs in the biological and social science area.
- The program allows us to enrich curricula to meet needs of potential scientists, technicians, and the future informed non-science citizens.

A multitude of outstanding examples of successful **Challenge Grants** can be cited, however noting but a few illustrates the innovative nature and important role these grants play in our agriculture and natural resource system.

Mississippi State University	A World Wide Web Hypermedia Textbook for Improving Instruction in Agriculture

University of Missouri	Interactive Computer-Assisted Program on Biotechnology
Pennsylvania State University	A Multimedia Server for Facilitating the Development and Delivery of Agricultural Courseware
Washington State University	Enhancing Horticultural Baccalaureate Degree Opportunities for Hispanic People
University of Kentucky	*Agripedia*: An Internet Accessible Interactive Multimedia Instructional Resource
Montana State University	GPS and GIS Technologies in Agriculture and Land Resource Science Education
Iowa State University	Interactive Multimedia Training Utilizing Digital Technologies for Instruction
New Mexico State University	Enhancing Faculty Capacity to Internationalize Professional Agriculture Curricula

Present funding for this **Higher Education Challenge Grants Program** is $4.35 million. The Academic Programs Section and the Board on Agriculture Budget Committee of NASULGC recommend funding for 1997 of $5.0 million. This modest increase will allow the agency to award larger grants, which will encourage cooperative grant proposals from participating schools. Presently the percentage of submitted proposals funded is only 19 percent.

The **Challenge Grants Program** is the cornerstone of the higher education effort of the USDA. This program complements and enhances the successful efforts of the **1890 Capacity Building Program** and the new programs for the 1994 land-grant institutions.

The very successful **Institution Capacity Building Grants Program for 1890 Institutions** strengthens the linkages among historically minority institutions and other colleges and universities, the U.S. Department of Agriculture, and private industry. This program is presently funded at $9.2 million. The Academic Programs Section and the Board on Agriculture Budget Committee recommended 1997 funding at $10 million. Building and enhancing the capacity of the 1890 institutions to educate undergraduates in agriculture and natural resources provides a sound base from which these institutions can enrich their programs through the **Higher Education Challenge Grants Program**.

Similarly, the 1994 land-grant institutions are building and enlarging their capacity to educate Native American students in agriculture and natural resources, primarily through the **1994 Education Equity Grants Program** and the interest from the **Native American endowment fund**. In addition, the 1994 land-grant institutions have authorization for a $1.7 million **Capacity Building Grants Program** to further develop their educational capacity and encourage cooperation with 1862 and 1890 institutions. These programs, aimed at substantially improving educational efforts of the 1994 institutions many, of which are only 20 years old and all with a scarce resource base, complement perfectly the **Higher Education Challenge Grants Program**. The **Higher Education Challenge Grants** build upon the educational foundation provided by the **1994 Education Equity Program, endowment**, and **Capacity Building Programs**. The Academic Programs Section and the Board on Agriculture 1997 Budget Committee recommend full funding for all of these necessary programs.

Another cornerstone of this educational effort is the **Multicultural Scholars Program**. This program allows institutions to encourage a variety of educationally outstanding minority students to enter the field of agriculture and natural resources. Again, it further extends the cooperation between 1862, 1890, and 1994 land-grant institutions. Presently the program is funded at $1 million with funds carried over to allow for a $2 million program every other year. We recommend funding for this important program at $2 million for 1997.

The **Graduate Training Fellowships** is the only federal program targeted specifically to the recruitment and education of pre-doctoral students for critical food and agricultural science positions in areas identified as having a shortage of expertise. The Academic Programs Section and the Board on Agriculture Budget Committee recommend funding at $4 million.

The above-mentioned programs have been extensively reviewed by the USDA–land-grant partnership members and have received a high priority ranking by both the Academic Programs Section and the Board on Agriculture of the National Association of State Universities and Land-Grant Colleges.

We appreciate the opportunity to submit this testimony and encourage your positive response to these prioritized requests.

PREPARED STATEMENT OF DR. FRANCILLE M. FIREBAUGH, DEAN, NEW YORK STATE COLLEGE OF HUMAN ECOLOGY, CORNELL UNIVERSITY

The Board of Human Sciences of NASULGC represents colleges and programs of human, family and consumer sciences which have evolved from a home economics heritage which has teaching, research, and extension programs are nutrition and health, social and economic well being of individuals and families, human development, and environmental design and technology. My testimony today is in support of the funding recommendations of the Board of Agriculture of NASULGC for research, extension, higher education, and international agriculture for FY 97.

RESEARCH

Base programs for research ($231.6M recommended) through the Hatch Act provide a critical foundation for research in the human, family and consumer sciences. The funds provide seed grants and funding for high priority research which is frequently leveraged with funding from the states and from other sources.

Research Grants P. L. 89-106 include **Competitive grants** (sec2b) (NRI) in the areas of **Nutrition, Food Quality** ($10M) and **Health and Rural Development, Markets and Trade**($8M) to which human, family and consumer sciences programs have much to offer.

Support for **Competitive Grants in Nutrition, Food Quality and Health Research** is central to USDA's role as the lead federal agency in nutrition committed to the improvement of health through the food system. We must capitalize on the investments which have led to exciting advances in these fields in the last 30 years. Competitive grants in **Rural Development, Markets and Trade** contain important areas such as rural development and particularly, stability and well-being of families, youth and the elderly. The aging of the rural population is complicated by a disproportionally high poverty rate, social isolation and limited access to transportation.

Included in the budget request under **Special Research Grants** (sec. 2c) is a new initiative **Strengthening the Rural Workforce**, with $500,000 requested for FY 97. The rural workforce is critical to American social and technical advancement and, indeed, sustainability of rural communities. A special initiative is needed to focus both on supply issues including education, family support, community problem solving as well as demand side concerns such as promoting entrepreneurship, encouraging more effective local economic policy to both increase permanence of firms and to strengthen the local tax base.

Research which involves the community itself will be important in achieving the goal of strengthening the rural work force. Finding effective ways to mobilize communities to invest in family support, education, and work force preparedness will require community and research partnerships.

The Land Grant system has a long heritage of collaboration with economic development, human services, and health and welfare agencies. Efforts have focused on creation of income through entrepreneurship, assessment of community infrastructure needs, and the related, but crucial issue of child care when parent are working.

EXTENSION

The **Base Programs** are supported by Smith-Lever funds and $306M is recommended by NASULGC, which represents an increase of 4.3 percent to maintain the critical base programs. The funds are combined with state and county dollars to undergird extension in the areas of Community Resource and Economic Development, Natural Resources and Environmental Management, Family Development and Resource Management, Leadership and Volunteer Development, Nutrition, Diet, and Health, and 4-H and Youth Development.

The **National Extension Priorities** include several of particular concern to the well-being of individuals families, and communities. Critical funding needs exist for **Water Quality** extension programs ($11.065M), for **Food Safety and Quality** ($2.438M), and **Youth and Families at Risk** ($10.85M).

WATER QUALITY. Concerns about **Water Quality** exist for millions of people and extension programs provide many with the education and tools to manage private water supplies and to work on the community level to preserve this valuable natural resource through watershed protection. The partnership of extension, individuals and communities contributes to a strong, grassroots effort to protect the environment. Cornell Cooperative Extension works with agricultural interests in the New York City water shed to negate the need for a $3.2 billion water filter system to serve residence of New York City.

FOOD SAFETY AND QUALITY. Through **Food Safety and Quality** initiative projects, the risk of foodborne illness is being reduced and the assurance of a safe food supply is increasing. Grants have supported the development of a food safety education for youth and for child care providers. In Nebraska, the ServSafe course insures that participants can implement the procedures of the National Restaurant Association program for food service managers on the safe handling of food.

YOUTH AND FAMILIES AT RISK($10.8M recommended). This initiative, begun in FY 91, has 96 community-based programs in all the states and two territories, with 15 state projects to strengthen community programs that serve 17,000 children and youth and 1,000 parents. The Cooperative Extension System National Children, Youth and Family Network of professionals is linked electronically and focuses on family resiliency, child care, science and technology, collaboration and decisions for health.

Each year, public and private agencies and organizations at state and local levels contribute cash and in-kind resources that exceed past federal appropriations. Programs are located in rural (53 percent) and urban (47 percent) and serve ethnically and racially diverse populations.

Within the **Specified Extension Service Programs** is the **Expanded Food and Nutrition Education Program** (EFNEP)($61.5M recommended) which is a voluntary, comprehensive nutrition education program for low-income families. Increased knowledge and skills enable participants to apply current dietary recommendations and to make optimal use of their WIC coupons or food stamps. Many states support the program beyond the federal allocation.

COLLABORATIVE RESEARCH AND EXTENSION PROGRAMS

The partnership between research and extension is well grounded in the land grant system, but the funding of collaborative programs has given new meaning to the partnerships. Programs to which the human, family and consumer sciences contribute are **Water Quality and Management**, **Food Safety**, and **Rural Development Centers/Communities in Economic Transition**. Funding for these programs will give continued impetus to not just identifying high priority needs, but to testing and evaluating solutions to problems in these areas.

SUMMARY

Since early in our nation's history our leaders have supported industry, research and extension as an essential investment in our nations future. Scientific, medical and technological research has led to discoveries from bio-degradable sutures, to advances in finding the impact of diet and the environment on cancer, to disease resistant grains and vegetables. These discoveries and their application are an important part of the on-going fundamental transformation of the world we live and work in. We call upon you and the Congress to continue your support.

PREPARED STATEMENT OF DR. JAMES P. LASSOIE, RESEARCH CHAIR AND PROFESSOR, DEPARTMENT OF NATURAL RESOURCES, CORNELL UNIVERSITY

The National Association of Professional Forestry Schools and Colleges (NAPFSC) represents the 67 universities that conduct the Nation's research, teaching, and extension programs in forestry and related areas of environmental and natural resource management. We appreciate this opportunity to comment on the three programs administered by the U.S. Department of Agriculture (USDA) which greatly enhance the abilities of our member institutions to effectively meet the needs of the American People: the McIntire-Stennis Cooperative Forestry Research Program (McIntire-Stennis), the Renewable Resources Extension Act (RREA), and the National Research Initiative (NRI).

Funding appropriated by Congress for **McIntire-Stennis**, in particular, has been a key part of university-based research support offering the flexibility to pursue high priority research needs in forestry while proving vital to the training of future scientists, educators, and managers. For more than 25 years, these funds have been judiciously allocated and have brought much in return. Each dollar in federal appropriations has been leveraged by a factor of five in nonfederal dollars in support of research programs having state, regional, and national significance. This is a very cost-effective and far-reaching program. RREA has been the principle vehicle for timely dissemination of new knowledge and it has leveraged more than three dollars for every dollar appropriated.

Finally, NRI has been crucial to fundamental and interdisciplinary research. All three programs have stimulated the development of unique partnerships involving universities, various federal agencies, nongovernmental organizations, and industry.

Throughout the country these three programs have been unqualified successes. They have improved the understanding of (1) the biology of forest organisms; (2) the structure and function of forest ecosystems; (3) human-forest interactions; (4) wood as a renewable raw material; (5) economics, environmental policy, and business management related to the forest industry; and (6) international trade, competition, and cooperation. These programs have advanced our knowledge of the forest ecosystem including the basic chemical, physical, and biological forces that influence forest health and productivity. At the same time, they have expanded the marketing horizons for environmentally friendly and renewable wood and fiber-based products. Furthermore, they have significantly aided the development of new forest management systems for multiple-uses including timber, water, wildlife, grazing, recreation, and aesthetic purposes. Very recent work has examined the economic and ecological benefits of combining agricultural and forestry practices into integrated land-use systems termed "agroforestry."

Why fund forestry research now? Unlike many sectors of the Nation's economy, justifying private investment in forestry research is problematic. The payoffs can be large, but individuals or industries are often deterred by the size of the investment required and the fact that benefits are diverse, accrue widely to society, and are not readily quantifiable. Consequently, most industry support is focused on product development where benefits are readily captured. Forestry research is especially difficult for individual landowners to perform because research problems are often very large and commonly extend beyond any single ownership. Also, forestry research investments are usually long-term with benefits accruing well into the future.

Federal funding is urgently needed because forestry in the United States is undergoing a major transition. Until recently, wood and wood fiber demands have mainly been met in significant part from federal lands. However, recent controversies over endangered species and alternative land-use practices have lead to challenges to USDA Forest Service's management plans which have greatly reduced the level of harvesting on federal lands. This means the bulk of the supply requirements has shifted to privately owned forest lands. To meet this major change, research priorities must be adjusted to better address the needs of private land owners, and to specifically enhance the productivity of such lands through economically efficient and environmentally sound means. Imports are not a viable option as the Nation cannot afford the trade imbalance, loss of jobs, or the importing of potentially serious plant, animal, and human diseases and pests. These challenges, however, can be met by the university community through the building of integrated research and extension programs assisted by McIntire-Stennis, RREA, and NRI.

Who benefits? Forestry research provides many direct and indirect benefits to society by increasing forest productivity, improving forest health, and providing diverse employment opportunities -- all while enhancing environmental quality and improving environmental protection. Forests contribute substantially to the economic well-being of the United States. Forestry related employment constitutes a large sector of our workforce, including manufacturing, research, and recreation. Forest product companies alone employed 1,580,000 people in 1988, representing 8.5 percent of the Nation's manufacturing workforce. Many of these benefits accrue in rural areas of the United States where economic and social viability remain a wide spread concern. In addition, approximately seven million nonindustrial private forest land owners manage almost 60 percent of the Nation's timberland. These private citizens depend on the generation of critical forestry research information and its accessibility through extension to support and improve the wide range of public and private benefits arising from their investments. Society as a whole benefits from the improved recreational opportunities and amenity values provided by healthy forests. By increasing our understanding of forest ecosystems, the forestry research-extension partnership also improves our ability to protect the environmental amenities associated with forest lands, including the protection of biodiversity and the improvement of water and air quality.

The sum of these arguments is that the past, present, and future success of forestry research and extension activities arising from the NAPFSC member institutions results from a unique partnership involving federal, state, and private cooperators. Much of the funding of forestry and forest products research comes from the private industrial sector. However, such funding is commonly committed within the companies themselves and is typically focused on near-product development where the benefits of investments are readily captured. Federal agencies have concentrated on large-scale national issues while state funding has emphasized applied problems and state-specific opportunities. University research in contrast, with the assistance of federal, state, private, and other support, has been able to address a broad array of applied problems related to technology development and fundamental biophysical and socioeconomic issues and problems that cross ownership, state, region, and national boundaries. This testimony encourages continued federal participation in this partnership with NAPFSC institutions by providing specific funding recommendations for McIntire-Stennis, RREA, and NRI. In particular, the federal share has been an important incentive and mechanism for focusing on the most meaningful mix of state, region, national, and international issues and problems and for leveraging funds from other sources.

Where are we? The partnership between the federal government and the NAPFSC has been long-standing and has proven very successful. Over the years, Congress, through its continued support of McIntire-Stennis, RREA, and NRI, has provided the funding avenues to address the above noted applied research needs in timely fashion. However, despite the gains made in developing research information needed to maintain the health, productivity, and environmental quality of our forest resources, much remains to be done.

We know only too well the public's concerns, both pros and cons, over such issues as ancient forests, threatened and endangered species, global warming, wetlands and wilderness preservation, and tropical deforestation. Furthermore, it is now paramount that these issues be addressed within the broader context of the need to enhance and sustain the economic, ethical, and social systems which are important to all Americans. Despite past progress, this testimony is driven by the fact that the scientific base to which resource management and national, state, and local policy measures can be anchored is simply inadequate. The urgent need for research on environmental issues related to forest lands is most apparent at the state and local levels. Management of land for timber, water, wildlife, and recreation is becoming increasingly more difficult and expensive because we lack reliable information on the best management and harvesting practices on a site specific, landscape, and regional basis. Finally, the emerging area of agroforestry lacks the biophysical and socioeconomic data bases critical for its implementation.

What are the important implications? The funding by Congress of McIntire-Stennis, RREA, and NRI has permitted NAPFSC institutions to quickly respond to changing research priorities in forestry. This year's request is for your continued support of university-based forest research and extension. This request reflects the increasing importance of forest resources to the economic, environmental, and social well-being of our citizens. The growing and processing of timber provide the economic superstructure for literally thousands of communities in all regions of the country. Some examples are:

- In Texas timber is the second largest crop and it accounts for the largest value-added sector associated with agricultural production.

- In New York forests cover almost 62 percent of the state, forest-related businesses employ about 122,400 people, and annual sales and payrolls from forest based industries total $13.3 billion.

- In Wisconsin the primary wood using industry employs over 94,000 people representing one in every six manufacturing jobs

- In Mississippi 38 percent of all manufacturing firms are in the forestry sector.

- In Illinois forest related industries employ 55,000 people and contribute $2 billion in valued added manufacturing

- In Arkansas the forest products industry accounts for one of every six basic jobs. Over half of the state is forested and timber was the state's leading cash crop.

- In Oregon the forest products industry represents 31 percent of the manufacturing jobs and represents $.35 of every $1 generated by the state's economy.

Whether by weight or volume, wood is our most widely used raw material. There is also convincing evidence that forest products will become even more important in the future. Global demand is increasing and coincides with diminished supplies in many established wood-producing countries of the world. The United States is well positioned in terms of timber supply and the manufacturing and transportation infrastructures needed to satisfy a major share of this increase in demand. However, continued economic competitiveness of forest-based industries in today's society requires that we develop more efficient and environmentally benign production and processing systems. These systems will be essential to success in increasingly competitive international markets.

The above economic characterization is not complete. We must add the very significant degree to which our forests provide the setting for outdoor recreation and the considerable economic impacts associated with such uses. In many areas, tourism and the forest products industry coexist very effectively and together make for very viable rural communities. There is also convincing evidence that forests, by virtue of their structure, will become even more important in maintaining biodiversity and the gene pool for a wide range of plants and animals. Especially important will be the role of forest communities within complex landscapes and the biophysical, social, and economic interrelationships between different land uses, including urban/suburban development.

Overall, we are facing problems that are more pervasive and complex than any previously addressed by humankind. We must question our collective ability to provide the diversity of goods, services, and values currently demanded by a pluralistic society while sustaining the natural resource and environmental quality bases equally critical to future generations. The structures and partnerships are in place to address these tough issues, but we must recognize that these relationships are fragile ones. Continued Congressional support of the **McIntire-Stennis**, RREA, and NRI will insure that we will continue to improve our understanding of how forest ecosystems function under a continually changing set of socioeconomic conditions.

A framework for action has been established. Three years ago the National Research Council published a study of forestry research needs which had been commissioned by the National Academy of Sciences. This report, entitled Forestry Research: A Mandate for Change, supported and recommended a significant strengthening of forestry research in the United States. Following the report, an implementation committee began working closely with partners including the USDA Forest Service, state foresters, forest industry, professional societies, and various interest groups to develop a cooperative effort known as the Forestry Research Initiative. The NAPFSC institutions and many of our cooperators see the expansion of this effort as an imperative for the environment and the economy and consider the Forestry Research Initiative to be a road map for this expansion. One example of this commitment is the recent report of the Forestry Research Advisory Committee (FRAC) of the USDA. This report highlighted questions relevant to forest policy needs and recommended additional investments in the following areas beginning in FY 96. These priorities continue to be relevant and to serve as a guide for forestry research and extension programs across the Nation. They include a need to:

- improve existing inventories and assessments of forest resources and their many functions;

- conduct research to improve the understanding of ecosystem dynamics and alternative forest management systems on the most productive lands to meet increasing demands;

- develop adaptive management strategies and prototypes for multiple-use management of forest lands to provide both commodities (wood and fiber) and other resource values (water quality, wildlife habitat, livestock grazing, recreation and aesthetics); and

- build a forestry research and education infrastructure to foster interdisciplinary studies on long-term sustainable forest management, promote timely scientific synthesis and communication, and provide anticipatory leadership.

Role of university leadership. Given these recommendations, it is important to recognize that forestry and natural resources research and extension programs arising from NAPFSC institutions are ideally positioned to make key contributions to these efforts and to society. We have a history of solid achievement in terms of (1) basic long-term inquiry; (2) issue-focused, problem-solving interdisciplinary research and development; (3) scientific support to the ongoing management of rural lands; (4) innovation in new product development, utilization, and recycling; (5) integrating science and the human dimensions of resource use into the policy-making process; and (6) close working relationships with the users of research information being facilitated through extension.

University-based forest research is also a key part of the collaborative research effort involving federal, state, and industry scientists and resources. Schools and colleges with programs in forestry, forest products, and natural resources have the expertise in-house to address a broad range of problems and opportunities related to the forest resource and its utilization. Because of their university affiliation, the faculty can conduct research on problems that require scientists from many disciplines.

The FRAC report also highlighted the need for a systematic extension process to:
- provide continuing education for natural resource professionals;

- enable landowners/managers/industry to access, adapt, and utilize research results;

- assure basic understanding by public decision-makers; and

- reach the general public with education to guide their individual and collective efforts.

Here NAPFSC institutions -- with their well-established education, extension, and communication capabilities -- can play a lead and very cost-effective roles.

We see the federal funding programs described herein as especially important to state and regional concerns as pressures on federal lands are shifted to private ownerships. In articulating the initiative described above, funding to universities would be largely directed to the problems of state, local, and private ownerships. In particular, the large, nonindustrial private forest landownership nationally is one that will have to carry a larger share of the burden for timber production and multiple use. These lands are also where considerable improvement in management is both desirable and possible for a wide range of forest values.

Our FY 97 request. Those of us at NAPFSC institutions know that our request for continued funding for forestry research and extension comes at a time when Congress must deal with severe budget constraints. We know you are looking for cost-effectiveness, accountability, and leverage -- all within an important backdrop of reducing the National Debt. We commend you for this effort. We also know that you value the concept of investing in programs that will shape the future of the United States. Given this situation, we call your attention to the major transition that has occurred in forestry and the associated land uses in America's rural areas. The number and complexity of the economic, social, and environmental problems associated with the forest resources of the United States and the world will likely grow unless we continue to invest strongly now.

It is this concern for the future that leads us to request your support in securing an appropriation of at least $21.5 million for the **McIntire-Stennis** Cooperative Forestry Research Program. This is the key federal program in support of forestry and natural resources research through our Nation's Land Grant Universities.

We also ask your continued support of and important component to our applied research program -- the **Renewable Resources Extension Act** at a modest funding level of $3.432 million. Extension activities made possible through the RREA have become integral parts of the outstanding programs conducted by the Cooperative Extension Service in each state. Funding for this Act have made possible the timely dissemination of research results derived from the McIntire-Stennis and NRI.

Lastly, we urge your support of the Competitive Grants Program administered under the **National Research Initiative** of the USDA. Peer competition for grants is at the heart of the university system and this program has become very important to natural resource scientists working within NAPFSC institutions. Research funds from NRI enable NAPFSC institutions to build upon the base provided by McIntire-Stennis. We urge funding of NRI at a level of $113.5 million, and specifically endorse a funding level of $22.0 million for its Natural Resources and Environment Program.

Final comment. We respectfully ask that you consider the continued funding of the McIntire-Stennis Cooperative Forestry Research Program, the Renewable Resources Extension Act, and the National Research Initiative. This is not simply a request for NAPFSC institutions, forest industries, or environmental organizations. Nor is it a request to only aid the forest landowners nationally. Rather, it is a request to address crucial needs and issues and invest in work that can have a significant positive effects on the environmental and economic health of our society for decades to come. Thank you.

NATIONAL ASSOCIATION OF WHEAT GROWERS

PREPARED STATEMENT OF CHUCK MERJA, PRESIDENT

The National Association of Wheat Growers (NAWG) requests consideration of funding for several priority programs which are vital to the welfare of the U.S. wheat industry: jointed goatgrass research, Russian wheat aphid research, Karnal bunt research, and cooperator foreign market development funding.

The NAWG urges that funding for jointed goatgrass research through CSREES be expanded to $600,000 in FY 1997 from $296,000 in FY 1996. This program is currently being administered through Washington State University with research grants competitively awarded on a national merit basis. For each CSREES dollar spent on this research program, nearly three dollars of wheat industry, state and other funding support are contributed to this program.

In addition, NAWG requests new funding for jointed goatgrass research through ARS of $300,000 in FY 1997. Both of these funding recommendations are also being supported by the National Jointed Goatgrass Steering Committee and numerous state wheat commissions and wheat grower associations.

Although this is a substantial increase in funding, the National Jointed Goatgrass Steering Committee (NJGGSC) believes that the actual funding need for this program is an annual budget of $1 million to CSREES and $600,000 to ARS (funding has never been directly appropriated to ARS). Jointed goatgrass costs wheat producers and the U.S. economy an estimated $145 million annually.

We have been asked by the Subcommittee staff about the presence of jointed goatgrass on Federal lands. A special survey was taken to respond to this question and a summary of its findings is enclosed. It was found that the grass infests an estimated 347,810 acres of Federal land in 11 Western states. Jointed goatgrass is spreading on to public lands and poses a serious threat to native species.

The enclosed executive summary of the National Jointed Goatgrass Research Program documents than an integrated, multi-disciplinary effort involving 11 states (Colorado, Idaho, Kansas, Montana, Nebraska, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wyoming) and 27 state and federal scientists is being conducted as a result of the CSREES special grant. The NJGGSC establishes priorities, controls allocation of funds and insures coordination of all programs. There is no duplication of research efforts. Research grants are competitively awarded on a national merit basis and reviewed annually by investigators and the steering committee. This program is truly a model for efficient and constructive use of Federal monies.

NAWG requests that funding for Russian wheat aphid (RWA) research through CSREES be continued at $455,000 for FY 1997 (the same level as FY 1996). The funding would continue to be divided equally between Washington, Oregon, Idaho, California and Colorado. This funding level is also being supported by state wheat commissions and grower associations.

The Russian wheat aphid is an extremely dangerous threat to wheat and barley production in the U.S. Introduced in Mexico in 1980, it had been found in Texas and Colorado by 1986, and by 1989 was found throughout the U.S. and three Canadian provinces. During the period of 1987-93, some 6.5 million pounds of insecticides have been used nationally for RWA control. The cost to American farmers of applying these insecticides during that same period exceeded $83.2 million. The total direct cost to farmers has been $432.6 million, and with the application of an economic multiplier, the total direct and indirect costs to farmers reached $893.1 million.

Each state receiving funding is pursuing vitally important management strategies and methodologies. For example: Due to continuing Federal support, Colorado has successfully developed and released a variety of wheat resistant to RWA, "HALT". "HALT" is the first RWA-resistant variety to be released and will be available to wheat producers later this year. Currently, researchers are utilizing molecular genetics methodologies to enhance the development of additional resistant wheat varieties. Without continued Federal support this project will have to cease.

In 1996, Karnal bunt, a disease never known to exist in the U.S., was discovered in wheat production areas of the Southwest. Karnal bunt is a fungal disease of wheat, triticale and rye. The fungus has a complex life cycle with several spore stages. Damage is twofold: (1) infected plants produce less grain and (2) the quality of the grain is lessened. Once plants are infected by the disease, there are no control measures to prevent development of the disease. Seed treatment and foliar fungicides offer partial control. Because of a lack of scientific information (almost no research exists in the U.S., since the disease was not known to be present here), the most effective control methods presently are not planting host crops for a period of 5 years and using quarantines to prevent the human-assisted spread of the fungus. Many countries apply a zero tolerance to grain imports, thus effective chemical protection must be developed to ensure that our fields, harvests and marketing system are not contaminated. Presently 51 countries prohibit or restrict the entry of wheat containing Karnal bunt. These countries account for 54 percent of U.S. wheat exports.

The magnitude of the Karnal bunt problem requires a strong, multi-disciplinary effort to control and eradicate the disease. Genetic research and crop protection research must be promptly initiated, and annual surveys of facilities in all states producing wheat must be performed. The NAWG estimates that $25 million will be required to meet research needs and to survey for Karnal bunt, inspect, quarantine and decontaminate damaged grain and property. The potential damage this disease presents all sectors of the wheat industry cannot be underestimated.

Finally, the NAWG wants to encourage additional funding for the cooperator foreign market development program (FMD) operated through USDA's Foreign Agricultural Service. We believe strongly that failure to invest more in the program prevents the possibility of utilizing new technologies in developing and servicing foreign demand. Moreover, as farm supports are cut through the "transition" established by the 1996 Farm Bill, farmers will become more dependent on the market place, and expanded efforts must be made to ensure that they are able to build overseas demand for their products and service growing markets. Our organization, state wheat commissions and growers associations recommend that the funding for the FMD program be increased to $40 million from the current level of $33 million.

We appreciate your attention to our views, and we look forward to working with you in the future.

Jointed Goatgrass - A Threat to U.S. Wheat Production

Executive Summary of The National Jointed Goatgrass Research Program
CSREES Special Grant, P.L. 89-106.

What is the Jointed Goatgrass problem?

- It is a devastating weed in winter wheat
- It infests 5 million wheat acres and it is spreading unchecked
- Yield losses of 25% to 50% are common
- It costs producers $145 million annually due to:
  - reduced yields and dockage
  - reduced ability to meet conservation compliance
  - increased tillage requirements
  - long rotations to less profitable crops or fallow
  - decreased land value
  - loss of export markets
  - presence of a single Jointed Goatgrass seed in a wheat seedlot voids its sale as certified seed

Why is Jointed Goatgrass so difficult to control?

- There is no way to control it in a wheat crop
- This weed proliferates in conservation tillage systems
- Jointed Goatgrass looks like wheat, so the problem often is not identified
- Jointed Goatgrass emerges in the fall with winter wheat
- Jointed Goatgrass seed is the same size as wheat, some seed is harvested with wheat and then planted the next year
- Jointed Goatgrass is so closely related to wheat it even crosses with wheat
- The seed stays dormant in the soil for five or more years

What kinds of work are being done to help solve this problem?

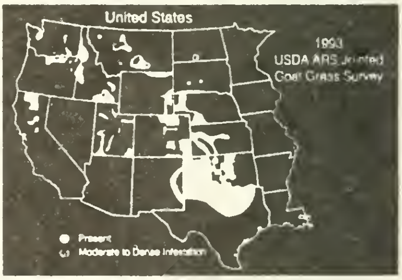
An integrated, multidisciplinary effort involving 11 states and 27 state and federal scientists has been initiated. The National Jointed Goatgrass Research Program was first funded in FY94 as CSREES special grant, P.L. 89-106.

I. Jointed Goatgrass Management Research
    1. Competition (wheat yield loss from Jointed Goatgrass)
    2. Planting Practices, Planting Date, Planting Density, Row Spacing
    3. Development of Competitive Wheat Cultivars
    4. Controlling Jointed Goatgrass Seed Production
    5. Crop Rotations

II. New Technology for Jointed Goatgrass Management
    1. Biological Control
    2. Herbicide Safeners - to allow selective control
    3. Computer-Based Decision Aids, based on a Bioeconomic Model

III. Technology Transfer and Extension
    1. National Extension Coordinator - to assimilate all available information and develop educational products to benefit all wheat producers
    2. Educational Materials that will have a national impact,
       a national video, slide set, poster, CD ROM, and electronic bulletin board
    3. Regional Educational Meetings
    4. National Jointed Goatgrass Symposium (scheduled for January, 1997)

[illegible] Winter Wheat Hybrid Jointed Goatgrass



Jointed Goatgrass dispersion

Which States are participating in this program?

Colorado	Competition, Planting Practices, Competitive Cultivars, Rotations, Technology Transfer
Idaho	Competition, Technology Transfer
Kansas	Competition, Planting Practices, Competitive Cultivars, Technology Transfer
Montana	Competition, Technology Transfer
Nebraska	Competition, Planting Practices, Technology Transfer
Oklahoma	Planting Practices, Competitive Cultivars, Rotations, Technology Transfer
Oregon	Controlling Jointed Goatgrass Seed Production, Technology Transfer
South Dakota	Technology Transfer
Utah	Competition, Technology Transfer
Washington	Competitive Cultivars, Biological Control, Herbicide Safeners, Technology Transfer
Wyoming	Competition, Planting Practices, Technology Transfer

Several experiments are being conducted at multiple locations, using the same experimental design. Results will help determine how to manage this weed in specific local environments and crop management systems

What will be the impact of this program?

- Wheat producers will learn to identify the problem and how to prevent the spread of this weed
- Producers will learn how to manage this weed
- New management strategies and systems will be developed and implemented through a commitment to technology transfer
- The economic impact of Jointed Goatgrass will be reduced
- Methods that control this weed will also control other costly weeds in winter wheat, such as downy brome, wild rye, and other grasses
- U.S. wheat production will remain profitable and competitive on the world market, benefitting U.S. exports

How much will this program cost?

- The Jointed Goatgrass Research Program is requesting continuation funding of $296,000 to CSREES for FY96

- However, the actual need for the program is an annual budget of $1.0 million to CSREES and $600,000 to ARS (funding has never been appropriated)

- In addition, program funding to CSREES was reduced from $315,000 (after 10% recision) in FY94 to $296,000 in FY95.

- ARS funding is needed to expand Jointed Goatgrass research and develop a computer decision aid - bioeconomic model (ARS provided $254,200 to the program through its administrative budget in FY95)

What additional work is needed?

- Multi-year studies on Integrated Management Systems are needed, in which several management strategies are combined
- On-Farm Trials, to implement technology available now
- New management strategies need to be developed and implemented
- This program seeks six years funding to complete this work

How is this program administered?

- The National Jointed Goatgrass Steering Committee (comprised of wheat producers, wheat commission administrators, extension specialists, and state and federal researchers) establishes priorities, controls allocation of funds, and insures coordination of all programs. There is no duplication of efforts. Members of this committee are listed below.
- National merit-based competitively awarded research grants
- An annual meeting of all investigators and steering committee is held to review all research projects and enhance communication
- This program is a model for efficient and constructive use of federal monies

For Further Information contact:

Darrell Hanavan
Colorado Wheat Administrative Committee
5500 S. Quebec Street, Suite 111
Englewood, CO 80111
Tel 303-740-4343 FAX 303-694-5807

The National Jointed Goatgrass Steering Committee

Darrell Hanavan (chair)	High Plains Wheat Producers	Colorado Wheat Administrative Committee
Mark Samson	Pacific NW Wheat Producers	Idaho Wheat Commission
Jack Sitzel	Pacific NW Wheat Producers	Washington Wheat Commission
Eugene Radke	High Plains Wheat Producers	Nebraska Wheat Board
James Carlson	SAES Administration	Washington State University
Stephen Miller	SAES Research	University of Wyoming
James Parochetti	USDA-CSREES	Washington, D.C.
John Radin	USDA-ARS Administration	Beltsville, Maryland
Randy Anderson	USDA-ARS Research-CO	Central Great Plains Research Station
Drew Lyon	Extension Service	University of Nebraska
Patrick Fuerst	Principal Investigator	Washington State University

NATIONAL CENTER FOR RESOURCE INNOVATIONS

PREPARED STATEMENT OF MARGARET S. MAIZEL, PRINCIPAL INVESTIGATOR

As ever, we appreciate this opportunity to provide testimony to the Senate Appropriations Subcommittee on Agriculture, Rural Development, and Related Agencies.

The *National Center for Resource Innovations (NCRI)* was established in 1990 through a joint private/federal initiative in an appropriation to USDA/Cooperative State Research Service. The consortium now includes six sites, one designated future site, and an Administrative Office in Rosslyn, VA. Each site in the consortium provides a unique expertise to this national program. NCRI capabilities include integration of large data sets in a GIS framework from the national level down to the farm field, weather analysis, land use planning, resource management at the state and local levels, and support for public and private policy development. The seven sites are:

1) *NCRI-Chesapeake:* NCRI Chesapeake, Inc., Rosslyn, VA
2) *NCRI-South West:* The University of Arkansas - Fayetteville, AR
3) *NCRI-South East:* The South Georgia Regional Development Center, Valdosta, GA
4) *NCRI-North Central:* The University of North Dakota - Grand forks, ND
5) *NCRI-North West:* Central Washington University, Ellensburg, WA
6) *NCRI-Great Lakes:* The University of Wisconsin - Madison, WI
7) *Future Site: New Mexico Engineering Research Institute (NMERI)* The University of New Mexico - Albuquerque, NM

The Mission of NCRI

To provide collaborative and innovative transfer of geographic information systems technologies to support local government and other public policy development and decision making.

NCRI Funding History

In the past, NCRI has consistently requested $1.8 million annually for minimum program operations. Federal funding for NCRI increased from $500,000 in 1990 to $1.075 million in 1994. Rescissions and other adjustments in 1994 reduced actual funding from $1.075 to $939,000 for 1995.

Cost/Benefit Analysis

At the request of Congressman Joe Skeen, Chairman of the House Appropriations Subcommittee on Agriculture, Rural Development, Food and Drug Administration and Related Agencies, each of the six NCRI sites has independently generated a cost/benefit analysis for their own site. The average benefit/cost ratio for NCRI's program is ***$7.40 for every federal dollar*** received from USDA/CSREES funds.

Current Funding Level

The current level of funding (FY '96) for NCRI is $939,000. NCRI requests that the current level of funding through the USDA/CSREES be sustained for FY '97 and that $100,000 be added to bring the New Mexico Engineering Research Institute (NMERI) at the University of New Mexico formally to the NCRI consortium.

Background

NCRI is a cooperative, coordinated network with its agenda coordinated through its corporate offices here in Rosslyn, VA NCRI operates primarily at the nexus of government where field level information systems have been developed, and academic centers where GIS technology and educational techniques are often developed. NCRI's program bridges the widening gap under a mandated reorganization of government The advantage of a consortium of regional centers is that each site has unique expertise and shares specialized technical support among sites, thereby strengthening the project as a whole through shared resources and experience needed to build complex and comprehensive information systems Site-to-site technology transfer and networking builds NCRI's overall capabilities, aids in problem solving, facilitates consistency and avoids duplication

NCRI and Precision Farming Technology

In the next five years, we will move from the age of GIS as a technology needing development to full-fledged efforts for building the needed information systems for on-the-go decision making itself Facilitated by its funding by USDA, NCRI is developing a new initiative under information technology-based precision farming The framework is provided for under the U S Department of Energy/USDA cooperative agreement for technology transfer and the Fund for Rural America, as authorized in the Federal Agriculture Improvement and Reform Act of

1996 Each site in the NCRI consortium brings its own unique knowledge and expertise to this effort, making the whole organization more the just the sum of its seven parts.

NCRI Site Expertise and Accomplishments

NCRI Chesapeake, Inc. (NCRI-CB) The Chesapeake project, covering all or parts of six states (42 million acres), is a unique cooperative effort between NCRI-Chesapeake, federal and state agencies, universities and others, to meet the objectives of the Chesapeake Bay Restoration Act of 1993. NCRI-Chesapeake is building an hierarchical - national, regional, sub-regional and local decision support system to address agricultural activities within ecosystem environments. In cooperation with the Harvard Lab for Computer Graphics and Spatial Analysis, NCRI-CB pioneered the use of the USDA's National Resource Inventory (NRI) in a GIS framework for agro-ecosystem modeling.

Having focused in early years on a national analytical framework that identified priority watersheds in the U.S. using agro-environmental indices, NCRI-Chesapeake is now building a multi-layer, comprehensive, consistent and coordinated GIS-based capability for resource managers to target technology, funds, personnel and programs upon identified areas of the Chesapeake watershed. Regions where there is a potential for pesticides to leach below the root zone, and areas where excess nitrogen from fertilizer and nitrogen from livestock waste have been identified. We have ranked the 56 subwatersheds in the region according to environmental indices. Environmentally sensitive resources such as wetlands and water bodies that can be directly and indirectly affected by farm chemicals, highly erodible croplands and erosion have been identified and highly permeable potential recharge areas have been found and characterized.

Currently, additions to the system include integrating nitrogen production from septic fields as part of an overall nutrient budget for the region and integrating social and economic characteristics of human populations in the ecosystem in order to better market conservation services by NRCS/USDA to technology consumers. This pilot project in Pennsylvania is to be extended to the entire Chesapeake and then to the nation, as appropriate.

But this is only part of the picture. NCRI-Chesapeake and NCRI-North Central have decided to work together with cooperators at Oregon State University and Michigan State University to exchange expertise on ecosystems, including biological and physical resources and high level weather information for each cooperator's respective region.

University of Arkansas-Fayetteville (NCRI-SW) NCRI-SW has been based at the University of Arkansas at Fayetteville since its inception in May of 1990. Through university support and hardware and software grants, the program has a fully-equipped research, training, and outreach facility capable of demonstrating a wide range of software for geographic information systems, remote sensing, spatial statistics, and database management. In the fall of 1994, expansion of the Center's facilities was completed to include five state-of-the-art teaching and research laboratories, ten offices, and a library/reading room. A variety of advanced computer equipment now facilitates the center's teaching, outreach, and cooperative project capabilities. This equipment includes over 50 high-performance workstations, two multi-processor servers on a fiber-optic network, a full complement of peripherals, software from many different vendors, and a variety of other up-to-date software and equipment. The Center was awarded the title of Center for Excellence by both Intergraph Corporation of Huntsville, Alabama, and Trimble Navigation, Ltd. of Sunnyvale, California.

NCRI-SW continues to focus on technology transfer through training, the development of statewide GIS databases, and representative projects demonstrating the cost/benefits and efficiency of GIS technology. The NCRI-SW mission has provided an opportunity for cooperation and communication among a multitude of community administration agencies. Great care is taken to assure that projects are chosen, through consultation with the appropriate state and local officials, that will serve the greatest number of rural constituents. During 1994, NCRI-SW participated in numerous projects that have directly benefited state, county, and rural citizens, such as the Catalog of Arkansas Digital Spatial Data, the Rural Infrastructure Mapping Project, the High Accuracy Reference Network Project, the Four County Solid Waste Management Mapping Project, and the Washington County Tax Assessor's Office GIS Project, Rural America 2000 facility which provides no cost access to state-of-the-art GIS equipment to rural governments which are evaluating the adoption of GIS technologies.

In 1996, approximately 130 individuals will attend professional short-courses at NCRI-SW. Classes included were *Introduction to GRASS, Advanced GRASS, Fundamentals of GPS, Advanced GPS, and GIS in Soil Science*. These classes were taught in our facilities here on campus and at on-site locations. Students came from diverse backgrounds such as: Cherokee Nation, Arkansas Air Guard, NWA Community College, Benton County 911, Oklahoma Biological Survey, Arkansas Historic Preservation Program, Washington County, Sabine River Authority, NRCS, Corps of Engineers. The number of professional short courses offered will increase from 14 courses offered in 1995 to a total of 20 in 1996.

South Georgia Regional Development Center (NCRI-SE) NCRI-SE's program is an integral component of the South Georgia Regional Development Center - a regional agency that supports local governments across ten counties. NCRI's primary objective is to encourage the use of geographic information for ecologically responsible decision making in this primarily rural region. "Real world" presentations by NCRI-SE using actual local geographic data has proven to be an effective method of demonstrating the value of GIS. This coupled with the experience gained by NCRI-SE personnel from implementing GIS for local governments, has proven invaluable to government managers in the south east region. NCRI-SE also provides direct technical and "hands on" advice and training for any regional entities working in the GIS realm.

One of the most successful programs at NCRI-SE is the Global Positioning System (GPS) program that was established in cooperation with the National Geodetic Survey/NOAA. This program provides data from its GPS Base Station to state, federal, and local agencies within a 300 mile radius. The GPS units themselves have increased the ability of local governments to collect data and make maps at a much lower cost than was previously possible.

This past year, many new GIS projects were started as others from the past were maintained, updated, and expanded. One of the cities that started their GIS project last year is already receiving the benefits of having the data at their own fingertips. They a now in the process of determining what layers of data to add next. Other projects that were started last year are still in the works but will soon be in use by local officials. All of these projects were relatively inexpensive to implement due to our GPS capabilities, use of existing data, experience, and desire to make cost-effective GIS available to our local governments.

University of North Dakota-Grand Forks (NCRI-NC) NCRI-NC's interdisciplinary research and technology transfer programs are located and supported at the University of North Dakota Regional Weather Information Center. From this facility, NCRI-NC is linked to the UND Aerospace Scientific Computing Center which houses a CRAY J90. The resource issues in the region are related to the enhancement and protection of farming and ranching which are principal contributors to the region's economy. The work performed within NCRI-NC and the Regional Weather Information Center has resulted in their being recognized by the Ford Foundation as a semifinalist in the 1995 Innovations in American Government Awards Program.

The NCRI-North Central site is leading a national effort in developing a National Agricultural Weather Information System. This prototype system is directed towards enhancing the use of precision agriculture through a more effective use of weather information. In parallel to the weather information system is the need to incorporate traditional GIS technology on the farm-field level. Currently, NCRI-NC is concentrating on promoting and developing GIS applications at the local and state levels. Current projects include research and development of remotely sensed satellite data to produce products for the agricultural community. Those products are to be made accessible to the general farming community via modern technological means, development of the importation and overlay of UND Doppler radar for Grand Forks County and the surrounding areas; development of the ND volunteer precipitation data base for analysis with land use/land cover for moisture availability and moisture needs assessment, and providing GIS technology assistance to eastern North Dakota and northwestern Minnesota for severe weather tracking and assessment.

NCRI-NC presently participates with North Dakota Governor's Task Force on Geographical Information System Technology Transfer which is attempting to expand the use of GIS across the state. Joint activities have also been developed with the UND Regional Weather Information Center, the USDA Natural Resources Conservation Service (NRCS) and the National Aeronautical Space Administration (NASA) to foster improved use of resources in preparing digital soil surveys.

Central Washington University (NCRI-NW) NCRI-NW continues to concentrate on the local and regional resource issues of the Yakima valley and eastern Washington. These issues include irrigation of agricultural lands, county planning needs, Native American interests, and the management of inter-mixed public and private lands. NCRI-NW works in close cooperation with the faculty and staff of Central Washington University as well as the GIS Lab.

Work continues with the Kittitas Reclamation District (KRD) on irrigation related issues. Digital orthophotography has been used in the study of unauthorized use of KRD water. The next phase of this project is to integrate the results of this study into KRD's GIS. NCRI-NW also works with the Kittitas County Public Works to develop a recreation map of Kittitas County. This has long been a goal of the county, but they have not had the resources to pursue it. With NCRI-NW's assistance and expertise this project is underway. The project will include not only the finished map, but also numerous new GIS data layers for the county's GIS.

Under a cooperative agreement with the USDA/Natural Resources Conservation Service (NRCS), NCRI-NW continues to digitize Washington State soil survey maps. NCRI-NW has been asked to become the distributor of NRCS digital soil survey data.

NCRI-NW continues work with the Yakima Resource Management Cooperative (YRMC) on GIS related projects. Current projects include a complete road map of the YRMC area and revision of the Cultural Resources Task Group's predictive model for pre-historic Native American cultural sites.

University of Wisconsin-Madison (NCRI-GL) The NCRI-Great Lakes project site is located at the Land Information and Computer Graphics Facility (LICGF) at the University of Wisconsin-Madison in the College of

Agricultural and Life Sciences. The Facility was instituted in 1983 to function as a research, teaching, and outreach resource in land and geographic information systems (LIS/GIS). Researchers at LICGF explore uses of LIS/GIS for local and regional land and resource planning to support social, economic, and environmental decision-making processes.

Most land records are created, managed, and used at the local level. Information generated from automated land records provides the essential elements of nation-wide spatial database on natural resources. Establishment of uniform specifications and standards for spatial data development in local governments is the basis for a consistent information system development. A major focus of NCRI-Great Lakes is developing a National Spatial Data Infrastructure model for local governments. LICGF's successes in institutionalizing procedures for automating and managing land records led to passage of Wisconsin law implementing a standard across the nation as states struggle to integrate the shared data demands between municipalities, counties, and state activities.

Current research is focused on determining factors that hinder or encourage the implementation of automated LIS/GIS, a survey is conducted annually to monitor adoption and diffusion of LIS/GIS at the county level. This will also be applied at other NCRI sites. A forest resource management system has been developed for a local citizen advisory committee in the Kickapoo River Watershed. Conservation and protection of a Nature Conservancy "Last Great Place" -- the Baraboo Hills -- has been facilitated through cooperation with several partners. A GIS-based "stormwater utility" has been constructed for Marquette, Michigan, to more effectively control the quantity and quality of urban runoff to Lake Superior.

NMERI-University of New Mexico The University of New Mexico (UNM), represented by the New Mexico Engineering Research Institute (NMERI), will be the seventh site in the NCRI consortium. NMERI personnel have been active in the development of New Mexico's state Geographic Information Systems (GIS) standards and the founding of the state's GIS Data Clearinghouse. NMERI has participated in various related committees, task forces, and programs aimed at bringing GIS and related technologies into wider use to solve real world problems. Notable among these are the Governor's Task Force on Water Issues, the New Mexico Information Infrastructure Task Force, and the Animal and Plant Health Inspection Service's (APHIS) National Grasshopper GIS Focus Group. NMERI has and continues to provide public service outreach and technology transfer in the education of GIS and related technologies, applied GIS research, decision support assistance requiring technology integration, and information dissemination technologies to broad audiences. Outreach activities have included: On-site and off-site demonstrations of GIS applications to local government officials, presentations on the use of World Wide Web resources for Rural user needs, Workshops on building GIS based Land Information Systems at the local level, and most recently the statewide coordination for local government participation in a nationally televised conference on Land Information Systems for Local Government: Issues and Interfaces.

Over the last four years NMERI has provided assistance to USDA's Plant Protection and Quarantine personnel in the automation of field survey data collection and near-real time reporting techniques for insect pest management. The methodology developed by NMERI for New Mexico was subsequently replicated for both North and South Dakota. NMERI participation in water resource planning and management issues has involved the development of GIS based applications for rapid retrieval of bibliographic holdings of multiple agencies by geographic units, e.g., communities, counties, and river basins. NMERI's areas of interest for 1996 includes watershed management interests along the US/Mexican Border and continued development of the New Mexico Environment Department's Drinking Water Sampling and Monitoring Information System.

Cooperative Initiatives

NCRI is immensely proud of its unique and effective national program that is producing better resource information systems in collaborative and cooperative efforts. We have accomplished much in our short lifetime and look forward to continuing work for increasingly better public policy and decision making leading to sustainable communities and resources.

We appreciate this opportunity to provide testimony to the Senate Appropriations Subcommittee on Agriculture, Rural Development, and Related Agencies. ***The current level of funding (FY '96) for NCRI is $939,000. NCRI requests that the current level of funding through the USDA/CSREES be sustained for FY '97, and that $100,000 be added to bring the New Mexico Engineering Research Institute at the University of New Mexico formally to the NCRI consortium.***

NATIONAL CITRUS RESEARCH COUNCIL

PREPARED STATEMENT OF RAY PREWETT

On behalf of the citrus industries in Arizona, California, Florida, and Texas, we appreciate the opportunity to submit this written testimony regarding appropriations for research on the Brown Citrus Aphid (BrCA) and Citrus Tristeza Virus (CTV). The attached initiative to address this matter has been developed by the National Citrus Research Council (NCRC) and is entitled, "A Cooperative

National Research Initiative to Control Citrus Tristeza Virus and Brown Citrus Aphid." Also enclosed is a copy of a technical paper on this subject, "Citrus Tristeza Virus and Its Aphid Vector *Toxoptera citricida*."

Section 888 of the Federal Agriculture Improvement and Reform (FAIR) Act of 1996 authorized appropriations of $3,000,000 in fiscal year 1997 for competitive research grants on the BrCA and CTV. These grants would be awarded on a competitive basis by the Secretary of Agriculture

The purpose of this testimony is to point out the significance of the arrival of the BrCA in the U.S., to summarize the need for this appropriation, to provide a brief explanation of the research priorities, and to explain the role of the NCRC.

Significance of BrCA arrival in Florida - The arrival of the BrCA in Florida in November, 1995 was not unexpected; however, it dramatized the need for a national initiative to coordinate a large scale effort to mitigate the effect of this most serious pest. Shortly after the discovery of the BrCA, representatives of all the commercial citrus producing areas joined together to form the NCRC with BrCA and CTV being the first priority of the council.

Both Florida and California have severe forms of CTV, which have proven costly, but they have been able to cope with the disease. With the BrCA now in Florida, there is a much greater sense of urgency to control the aphid and severe forms of CTV

What is the difference between the BrCA and other aphids that can also spread CTV? The BrCA is an extremely efficient vector (transmitter) of the most severe strains of CTV, which have killed millions of citrus trees in many parts of the world. Side-by-side comparative studies with five exotic CTV strains showed an average single-aphid transmission rate of 16 percent for BrCA compared to 1.4 percent for the common cotton aphid, *Aphis gossypii*. The BrCA is also very prolific which increases the threat of this pest. A mature female may produce 40 to 70 nymphs in 12 days, and the young nymphs mature in 12 days.

There is a strong consensus among citrus entomologists that the BrCA will spread rapidly in Florida this spring and will continue the movement to Texas, Arizona, and California. Citrus growers are quite literally in a race with the BrCA for new knowledge to control this aphid and CTV before it devastates the U.S. citrus industry

Need for appropriations - Important strides have been made by the U.S. in developing technology to detect, control, and manage CTV The U.S. has had the opportunity to learn from the experience of other countries, including Argentina and Brazil where severe forms of CTV killed 30 million trees in the 1930's Citrus production in Brazil has managed to survive and rebuild following devastation from this virus. The world wide costs to citrus producers and dislocations for workers and related businesses have been severe This appropriation is needed to mitigate these costs to U.S. growers, workers, exports, and our balance of trade. The U.S citrus industry has gross revenue in excess of $19 billion dollars and employs thousands of workers.

The NCRC has reviewed existing research efforts and estimated the cost of the national research initiative to be $3,000,000 per year for the next several years. In developing the research priorities in this initiative, care has been taken to select projects that were of national importance and could not be done effectively by industry sources, state funding, or existing federally sponsored projects.

Priority research needs - The following high priority research needs, reflecting problems and needs held in common by all the citrus producing states, must be met to achieve control of the diseases caused by CTV in the U.S

- Characterization of CTV strains
- Improved methods for detection of CTV.
- Biology and control of the BrCA.
- New sources of host resistance
- Epidemiology and crop loss assessment

- Certification programs for production of pathogen-free plants
- Development of cross protecting strains for tree vaccination.
- Maintenance of USDA Beltsville Exotic Virus Collection.
- Technology transfer.

As scientists learn more about the biology of the BrCA and the transmission of CTV, the short term research priorities may need to be adjusted, and this will be done through the NCRC at least once a year.

Role of National Citrus Research Council - The NCRC was formed to ensure that the priorities are focused on the greatest needs, to facilitate coordination among scientists in the affected states, to assist in obtaining resources necessary for the research, and to apply the technology to the BrCA/CTV problem as soon as possible. Present plans are for the NCRC to meet at least once a year and for research leaders of the various projects to collaborate as often as necessary. An annual report will be prepared summarizing the results of each project for distribution to researchers, citrus industry leaders, and government officials.

Membership on the NCRC consists of grower organization representatives, growers, and scientists. USDA agency personnel will serve in an advisory capacity to the NCRC. Current members of the NCRC are:

Chairman. **Ray Prewett**, Executive Vice President of Texas Citrus Mutual
Vice Chairman. **Bobby F. McKown**, Executive Vice President/CEO of Florida Citrus Mutual

Members: **Ted Batkin**, Manager of California Citrus Research Board
Clay Everhard, Texas Citrus Mutual
Mike George, California Citrus Mutual
Dr. Walter Kender, Director of University of Florida Citrus Research & Education Center
Dr. Richard Lee Plant Pathologist, University of Florida Citrus Research & Education Center
Peter Martori, Arizona citrus grower/shipper
Joel Nelsen, President of California Citrus Mutual
Dr. MaryLou Polek, Plant Pathologist, California Department of Food and Agriculture
Dr. Mani Skaria, Pathologist, Texas A&M University - Kingsville, Citrus Center
Steve Sorrels, Florida Citrus Mutual
Dr. Dariusz Swietlik, Asst. Center Director, Texas A&M University in Weslaco
Dr. Glenn Wright, Yuma-Mesa Ag Center, University of Arizona

Advisors: **Dr. Edwin L. Civerolo**, Research Leader, USDA/ARS, Davis, California
Dr. Lloyd Wendel, Laboratory Director, APHIS-PPQ, Mission, Texas

On behalf of the NCRC and the citrus industries in Arizona, California, Florida and Texas, we want to thank you for this opportunity to submit this research initiative to members of this committee.

NATIONAL COOPERATIVE BUSINESS ASSOCIATION

PREPARED STATEMENT OF ALAN P. ZEPP, VICE PRESIDENT, GOVERNMENT RELATIONS

Mr. Chairman, Members of the Committee, this statement is submitted today on behalf of the members of the National Cooperative Business Association and in recognition of their personal and financial support for the creation of a network of rural cooperative development centers across this country. Funding for that network has been facilitated by a USDA program authorized by Congress and funded since 1993 by this committee. We appreciate your support for this important, successful cooperative development initiative.

I am addressing the program authorized by Section 2347 of the 1990 farm bill, which authorized a program of Grants for Technology Transfer and Cooperative Development. Beginning in 1993, this committee provided funding for the program, and report language and conference report language over the years has indicated your strong support for the concept of using this funding for the purpose of creating centers for rural cooperative development.

Members of NCBA, along with other cooperative interests in this country, joined together in a national Cooperative Rural Development Task Force, both to support the necessary legislation and to promote a network of effective centers around the country whose mission is to promote the creation of cooperatives as part of our national rural economic development policy. To date, eight centers in that network have received funding under this program, a ninth has joined the network, and others around the country want to become participants.

This year, the Congress indicated its strong commitment to the centers approach when it passed the FAIR Act, also known as the 1996 farm bill. The program of Grants for Technology Transfer and Cooperative Development has been changed into a program of Rural Cooperative Development Grants by Section 747(c)(4) of Public Law 104-127, which dictates in considerable detail the Congressional intent that this funding be used to "make grants ... to nonprofit institutions for the purpose of enabling the institutions to establish and operate centers for rural cooperative development." The authorization level remains at $50 million per year.

The new law defines the goals of these centers to be "to facilitate the creation of jobs in rural areas through the development of new rural cooperatives, value added processing, and rural businesses." At a time when a half century of federal programs aimed at improving economic conditions in rural America by ensuring fair farm prices is coming to an end, it is appropriate that we do all we can to foster alternative economic development options.

Existing cooperatives certainly believe that, and demonstrate it through their support of this network of cooperative development centers. The Congress, and this committee in particular, have clearly demonstrated strong support in the past for cooperative development centers, and we hope you will do so again this year.

Indeed, historically the Senate has led the way in Congress on this issue. But this year, the House Appropriations Committee is setting a strong example. Yesterday, the House Appropriations Subcommittee on Agriculture, Rural Development, FDA and Related Agencies approved a Fiscal Year 1997 appropriations bill that provided $3 million for this program, despite the fact that the subcommittee was faced with cutting almost $1 billion from the bill.

We understand the budgetary pressures this committee operates under, and we appreciate the financial support you have provided in the past. In light of the successes of this network of centers in creating rural economic development, however, we ask you to continue to demonstrate your support by appropriating $5 million for FY 1997. You will find this to be an investment that pays sustainable dividends in the years to come.

The existing centers hope that new centers will be created, and that those centers will join them in their network, which is dedicated to replicating successes, learning from one anothers' mistakes, and refining the "science" of cooperative economic development. This year, the centers have produced a landmark publication "Best Practices for Cooperative Development -- Defining, Communicating & Replicating Success."

This publication demonstrates the efficacy of Congressional and Departmental support for these centers. I've been told that it's too lengthy to be published as a part of the record, but I have provided copies to staff, and would be happy to give a copy to any one else who wishes one. It is information that is well-shared, and useful to others across rural America.

Again, thank you for your past support. The modicum of money we have been able to make available for this effort has gone a long way in terms of the economic activity it has generated.

NATIONAL COTTON COUNCIL OF AMERICA

PREPARED STATEMENT OF JOHN MAGUIRE, VICE PRESIDENT, WASHINGTON OPERATIONS

This is to transmit the cotton industry's requests for FY97 funding for various programs under the jurisdiction of the Subcommittee on Agriculture, Rural Development and Related Agencies. The National Cotton Council would appreciate your assistance in making this letter a part of the subcommittee's hearing records related to the FY97 appropriations bill.

The National Cotton Council of America is the central organization of the U.S. cotton industry representing growers, ginners, warehousemen, cottonseed crushers, merchants, cooperatives and manufacturers whose primary business operations are located in 17 cotton producing states. Cotton Council International is the overseas promotion arm of the cotton industry. The annual farm gate value of U.S. cotton production is about $6 billion and its retail value is approximately $60 billion. As a result of effective farm policy, coupled with aggressive research and promotion programs, demand for U.S. cotton in domestic and export markets has grown steadily. U.S. manufacturers have invested nearly $25 billion in new plants and equipment in the U.S. during the last 10 years. Further, the growth of U.S. textile product exports has been an important development for the industry.

I also want to use this opportunity to urge the members of the subcommittee not to use the FY97 appropriations measure as a vehicle to make changes in farm policy. As you know, Congress just completed a lengthy debate culminating in approval of the Federal Agriculture Improvement and Reform Act of 1996 (FAIR). USDA is currently in the process of developing regulations necessary to implement the legislation which makes significant modifications to our nation's farm policy. Whether or not one agrees with the new policy, any major changes to the new farm law at this juncture would further delay implementation and create confusion and instability at a very critical time. Specifically, changes in program eligibility through imposition of new limits or means testing, changes in the operation of commodity programs, and reduction or modifications to authorized funding levels for trade, conservation, and research programs will serve only to disrupt farm operations and erode our ability to adjust and compete.

The FAIR Act is estimated by CBO to cut spending on farm programs by nearly $10 billion over the next 7 years compared to the February 1995 baseline and by $2 billion compared to the revised November `95 baseline. We recognize there are differences of opinion between members of the authorizing and appropriating committees related to the handling of certain mandatory and discretionary accounts. We recognize the pressure members of the subcommittee face in establishing priorities for rapidly declining financial resources. However, we must urge the members of the subcommittee to reject significant policy alterations as an option for resolving jurisdictional or funding difficulties.

U.S. agriculture's long term viability and potential for continued improvement depend on: an effective, market-oriented farm policy; an investment in the development and application of scientific principles; and, aggressive market development activities. The National Cotton Council welcomes the opportunity to provide the following recommendations and requests for FY97 appropriations for programs which make important contribution to our industry's ability to compete and prosper:

Summary of Requests

1. Pink Bollworm Programs - APHIS	$2.29 million
2. Boll Weevil Eradication - APHIS	$18.066 million
3. Silverleaf Whitefly - ARS, CSREES and APHIS Plan	Current level for USDA Action
4. Market Access Program (MAP)	$90 million
5. Foreign Market Development (FMD)	$33 million
6. Cottonseed Oil Assistance Program (COAP) and Sunflower Oil Assistance Program (SOAP)	$20 million
7. Value Added/Quality Cotton Textile Research	Urge New Orleans-SRRC and Clemson facilities to continue work
8. Germplasm Enhancement	$100,0000
9. Oilseed Processing & Quality Research	Continue work
10. Plant Science Research	Continue NRI Support
11. PM-10 CSREES	$873,000
12. WRP, CRP, EQIP, Mitigation Pilot Program FAIR	Funding levels authorized by

Brief Background on requests:

1. Pink Bollworm Programs

The pink bollworm is a serious economic pest in West Texas, New Mexico, Arizona and the southern desert valleys of California. California growers for more than two decades have joined USDA/APHIS in a partnership known as the cooperative pink bollworm containment program. Through comprehensive cultural and biological controls, pink bollworm establishment has successfully been prevented in the San Joaquin Valley.

Sterile moth releases are an essential component of this program. Use of bio-rational methods includes sterile adult moths, pheromone traps and cultural methods which allow control of the pink bollworm without use of pesticides. Over 6 million moths are reared and sterilized each day in Phoenix facilities leased by California producers. Equipment, methods and partial support for rearing and operations are furnished by APHIS.

Investments in new rearing capacity will provide opportunities for USDA-APHIS, ARS, state organizations, and producers to demonstrate area-wide management of pink bollworm infested areas by integrating newly approved Bt cotton, cultural controls, making disruption with pheromones and sterile moth releases. Eradication is feasible using this technology in a highly coordinated, area-wide basis. The Council's Pink Bollworm Action Committee has endorsed the area-wide approach, ensuring a high level of producer support.

Funding for USDA-APHIS, PPQ pink bollworm programs has been cut by over 50% compared to FY94 levels resulting in delays in completing the pilot area-wide demonstration program in southern California. Completion of the pilot program is essential before producers can consider expansion of the program into other infested areas in the U.S. This Administration's goal of reduced pesticide use, optimum use of Integrated Pest Management (IPM), and reduced production costs are within reach because of the partnership between states, the Federal government and producers.

The industry request that FY97 funding be restored to the FY94 level of $2.29 million.

2. Boll Weevil

   Cotton industry's request for FY97 is to provide federal cost sharing for the eradication program. The industry's plan calls for overlapping programs and for programs operating simultaneously in the Southeast and Mid-South regions and in Texas and Oklahoma region. Additionally, this funding is for completing eradication programs in Alabama, Texas Southern Rolling Plains and for maintaining the Texas High Plains Containment program.

   The plan to accelerate the eradication of the boll weevil from the U.S. began in FY95. Boll weevil eradication programs operationally began during FY95 on 335,000 acres in North Alabama, Middle Tennessee, and 26 eastern Mississippi counties and on 225,000 acres in the southern rolling plains in Texas. Growers in the lower Rio Grande Valley who voted in 1994 to begin eradication on 300,000 acres subsequently voted to halt the program at the end of 1996, as have growers in eastern Mississippi.

   Producers in Texas will begin eradication on 1.3 million acres in the Fall of 1996. New programs (650,000 acres in Central Rolling Plains and 650,000 in south Texas and Wintergarden area) have been modified to minimize problems with worm outbreaks which can occur during the first year of eradication.

   Initiating boll weevil eradication is a critical financial commitment for every cotton producer. Cost sharing is especially important the first year when the grower must pay a boll weevil assessment on top of all other production costs. Growers are preparing themselves to pay a larger share of the costs of eradication but cost sharing is essential to compete eradication in all infested areas of the U.S. The program requires a highly coordinated program supplied with equipment and trained personnel to work over a large area. USDA APHIS PPQ, the federal action agency with unique expertise for conducting such programs, has been invaluable ever since the 1978 eradication trial in Virginia and North Carolina by providing leadership, experience, and direction to the Boll Weevil Eradication Program. Their involvement now is more important than ever as multiple overlapping programs are initiated.

   Elimination of the boll weevil places U.S. cotton producers in position to be cost competitive with any other cotton producing country and a strong cotton economy means strong state and local economies with more jobs and an increased tax base. In Georgia, for example, acreage increased from 163,000 in 1992 to over 1,000,000 in 1995. Finally, the environmental benefit has been documented in the southeast by reduction of insecticide use by 40-85%. Sprays have been reduced from an average of 10 to 16 per season down to 3 to 5. With the introduction of worm resistant Bt cotton, elimination of the boll weevil takes on added significance.

Although the accelerated plan launched in FY95 calls for significantly more funding for APHIS' cost share in FY97, recent developments in east Mississippi and south Texas dictate a careful review of the expansion plans. For FY97, with cooperation from all regional boll weevil foundations, an appropriation of $18.066, the same level as FY96, will provide funds to operate active eradication programs and support new programs under revised protocols on about 1.2 million acres in two Texas zones and other areas which may initiate programs in FY97. The industry also asks the subcommittee to urge USDA to follow through on development of a revolving loan program which would be assessable to areas initiating eradication efforts.

3. Silverleaf Whitefly
The whitefly is a cotton pest of significant importance causing yield, disease, grade and contamination losses for growers. Sticky cotton, caused by whitefly honeydew is a serious problem for textile mills who at the least impose price discounts and in some cases will refuse cotton originating in areas with whitefly infestation. The Council strongly supports funding the continuation and extension of USDA's 5 year Whitefly Action Plan which calls for a multi-disciplinary approach consisting of basic research, biological controls, integrated pest management, plant breeding for resistance, and insecticide controls.

4/5. Market Access Program (MAP) and Foreign Market Development (FMD)
The cotton industry has consistently employed a long-term export market development strategy. Cotton Council International, the overseas promotion arm of the U.S. cotton industry, is a participant in the Market Access Program (MAP) and Foreign Market Development Program (FMD). Activities carried-out under MAP and FMD have been responsible for increased export sales of raw cotton and cotton products including cotton textiles. The U.S. cotton promotion have not only increased sales, they have generated more than $2.50 in matching contributions for every $1 spent. In operating programs under MAP the industry insists on the following: (1) purchases of U.S. cotton and for textiles must be documented, (2) sales impact must be well-documented, (3) no funds are provided to foreign or domestic firms, (4) matching contributions must be documented, and (5) no funds may be used to promote exports to the United States.

Raw cotton exports now average over 8 million bales annually and approach $4 billion in value. Exports of value-added cotton products have quadrupled and add another $5 billion to overall cotton exports - creating thousands of jobs. The cotton industry urges $90 million be made available for MAP for FY97. We also urge that the FMD program be funded at a level of at least $33 million. The industry strongly supports adequate funding for FAS personnel who carry-out important export enhancement functions at headquarters and abroad.

6. Cottonseed Oil Assistance Program (COAP)
The cottonseed products industry estimates that the differences in market value of cottonseed oil, with and without COAP, would equate to about $9-13 per ton of cottonseed at the farmgate. With annual production projected in excess of 6.3 million tons, this translates to increased farm income of about $50 million plus the employment and other economic benefits of moving valued-added products in the export market. In recognition of the success of COAP/SOAP in helping U.S. exports remain competitive thereby increasing employment and farm income and further acknowledging the impracticability of using EEP to accomplish the same objectives, the cotton industry urges the subcommittee to authorize use of Section 32 funds for FY97 to operate COAP and SOAP at GATT consistent levels.

7. Value-Added/Quality Cotton Textile Research
The competitiveness of agriculture depends not only on efficient production, but value added processes as well. ARS labs have been forced to sharply reduce support staff, equipment purchases, and scientist positions due to rising costs and shrinking budgets. The industry urges continuation of value-added quality oriented research at the SRRC in New Orleans and at Clemson University.

8. Germplasm Enhancement
The United States cotton germplasm collection is maintained at the ARS Southern Crops Research Laboratory in College Station, Texas. This collection serves public and private researchers nationwide as they attempt to meet increasingly serious challenges for yields, quality and solutions to environmental problems.

The ARS has developed a long-range comprehensive plan for revitalizing the germplasm enhancement program at College Station. While we fully support the overall ARS plan, the most urgent need is for support of the germplasm enhancement and evaluation program for winter increases.

To meet crucial short term operational needs for the germplasm program, ARS has temporarily shifted funds from other high priority research projects. However, to assure baseline support, we are requesting an increase of $100,000 for the Southern Crops Research Laboratory in College Station, Texas for FY97.

9. Oilseed Processing and Quality Research
The USDA ARS Southern Regional Research Center (SRRC) in New Orleans has a long history of research for adding value to commodities including improvements in processing and utilization of cottonseed and its products. In addition to its fiber research, the ARS has developed, in cooperation with the crushing industry, a set of goals for improving process efficiency, maintaining product quality and enhancing food safety.

Specifically, research at the SRRC is working in three areas important to cotton and other oil seeds. First, is research to remove gossypol, a naturally occurring component of cotton seeds which is toxic at high levels to some animals. Removing gossypol from cotton seed and its products is technologically feasible, however research is needed to determine optimum processes of removal. The ability to market a high quality protein product for animal consumption is a key ingredient to enhancing markets of US cotton products at home and abroad.

Aflatoxin control is also an important part of the SRRC research goals. Eliminating food and feed risks of the mold which produces aflatoxin is a high priority for cotton, peanuts, corn, tree nuts and other crops. Pioneering research conducted by researchers in New Orleans is leading the way to solving this multi-million dollar problem of US agriculture.

Finally, work to enhance processing efficiency while assuring environmental responsibility is the third component of the SRRC mission in oilseed utilization research. Developing new and novel approaches for extraction of oil while meeting new environmental objectives is important for cotton and other oil seed commodities.

We request that congress continue to recognize the USDA/ARS work at the Southern Regional Research Center for its contribution to agriculture and ask that the unit continue to be funded at at least the current level.

10. Plant Science Research

Agricultural Research conducted by the in house program of USDA's ARS and the State Agricultural Experiment Stations with CSREES support is essential for the long term viability of agriculture. While we are strongly supportive of the ARS and CSREES we also recognize the benefits of the basic research--sometimes at the molecular level-- made possible by the National Research Initiative (NRI). The NRI is a key component of the USDA's research portfolio and complements other programs in the ARS and CSREES.

We appreciate your strong record of support for vital plant science research made possible through the NRI, the ARS and CSREES.

11. PM-10

A variety of studies allege that agriculture is a major source of PM-10 emissions. The cotton ginning industry is already making significant investments to reduce emissions and develop air quality compliance plans. The research conducted by USDA is critically important to assist ginners and producers in making cost effective decisions. We urge funding for CSREES' PM-10 programs be continued at not less than `96 levels.

12. CRP, WRP, EQIP, Mitigation Banking

The new farm bill extends authority for the operation of the CRP and WRP. It also authorizes a new program, EQIP, to provide assistance for projects designed to protect water, soil and related resources. The legislation authorizes operation of a pilot program for Wetland mitigation. The cotton industry urges funding be made available for these programs at levels authorized by FAIR `96.

PREPARED STATEMENT OF THE NATIONAL EASTER SEAL SOCIETY

The National Easter Seal Society appreciates the opportunity to report on the remarkable success of the USDA Extension Service AgrAbility Program and recommend that funding for the AgrAbility Program be increased to $3.0 million in fiscal year 1997.

Agricultural production is one of the nation's most hazardous occupations. Each year, approximately 200,000 people working in agriculture experience injuries that limit their ability to perform essential farm tasks. Tens of thousands more become disabled as a result of non-farm injuries, illnesses, other health conditions, and the aging process. Nationwide, approximately 500,000 agricultural workers have physical disabilities that prevent them from performing one or more essential farm tasks.

For many of these individuals, the presence of a disability jeopardizes their rural and agricultural futures. Rural isolation, a tradition of self-reliance, and gaps in rural service delivery systems frequently prevent agricultural workers with disabilities from taking advantage of growing expertise in modifying farm operations, adapting equipment, promoting farmstead accessibility, and using assistive technologies to safely accommodate disability in agricultural and rural settings. Yet, with some assistance, the majority of disabled agricultural workers can continue to earn their livelihoods in agriculture and participate fully in rural community life.

The AgrAbility Program was created to assist people with disabilities employed in agriculture. It links cooperative extension services with nonprofit disability service organizations to provide practical education and assistance that promotes independence in agricultural production and rural living. AgrAbility has emerged as one of rural America's most valuable and cost-effective resources.

Currently, AgrAbility projects in nineteen states assist hundreds of farmers, ranchers, and others with disabilities and their families; educate thousands of professionals working in agriculture, health, and vocational rehabilitation; generate awareness among hundreds of thousands of people through displays at state and county fairs, farm shows, and conferences; produce useful materials; and, engage hundreds of volunteers in project activities to benefit rural families affected by disability. Hundreds of individuals and groups receive information on accommodating disability in agriculture through the AgrAbility Program's national support project.

The FY 1996 appropriation for the AgrAbility Program was nearly $2.0 million, essentially the same as that allocated in fiscal years 1994 and 1995. At present, AgrAbility projects serve Colorado, Idaho, Illinois, Indiana, Iowa, Kentucky, Minnesota, Missouri, Montana, Nebraska, New Jersey, New York, North Carolina, North Dakota, Ohio, Pennsylvania, South Dakota, Tennessee, and Wisconsin. The average grant award per state is $95,000, which generally supports a one-to-two person staff at each partner agency.

About a dozen states have sought AgrAbility funding without success, including California, Mississippi, and Washington. Additionally, funding limitations in FY 1995 resulted in the loss of USDA support for established AgrAbility projects in Louisiana, Michigan, New Hampshire, South Carolina, and Vermont. Each of these states can demonstrate significant unmet needs among farm and ranch families affected by disability that AgrAbility could potentially address.

The AgrAbility Program was established under the 1990 Farm Bill, which authorized the Secretary of Agriculture to make grants to enable Extension Services to conduct collaborative education and assistance programs for farmers with disabilities through state demonstration projects and a national grant for training, technical assistance, and information dissemination to support state-level activities. The program combines agricultural know-how with disability expertise to provide people with disabilities working in agriculture with the specialized services that they need to safely accommodate their disabilities in everyday farm operations. AgrAbility received strong bipartisan support during the recent Farm Bill reauthorization, and was extended through fiscal year 1997.

Under the statute, state and multi-state AgrAbility projects engage Extension Service agents, disability experts, rural professionals, and volunteers in offering an array of services, including: identifying and referring farmers with disabilities; providing on-the-farm technical assistance for agricultural workers on adapting and using farm equipment and tools; modifying farm operations and buildings; providing agriculture-based education to prevent further injury and disability; and, upgrading the skills of Extension Service agents and other rural professionals to better promote success in agricultural production for people disabilities.

The authorization for fiscal year 1997 totals $6.0 million, representing $5.0 million for state-level activities and $1.0 million for nationally-coordinated training, technical assistance, and information dissemination.

The AgrAbility Program is an excellent example of how a relatively modest investment of public resources can boost rural productivity and substantially improve the quality of life for thousands of rural Americans with disabilities. A brief description of selected project activities follows.

In Kentucky, Richard Montgomery, a 59-year-old tobacco and beef farmer, experienced a stroke in 1995 that caused paralysis to the left side of his body. Richard received therapy services from the Cardinal Hill Rehabilitation Hospital in Lexington, which partners with the state extension service to conduct the Kentucky AgrAbility Project. AgrAbility staff met with Richard in the hospital to evaluate his post-stroke abilities and to discuss his return to farming. After discharge, AgrAbility staff performed an extensive on-farm evaluation, and were instrumental in helping Richard to modify his tractor and farm buildings to enable him to continue to farm as he did before his stroke. Richard is one of 54 farmers and farm families served by the Kentucky Project during the past six months.

The Pennsylvania AgrAbility Project recently helped a western Pennsylvania dairy farmer obtain the three lifts that he needed to use his two tractors and milking pit. The lifts enabled him to overcome weakness in his arms and difficulty climbing stairs, problems caused, respectively, by shoulder rotator cuff surgery and replacement of both knees. AgrAbility staff worked closely with the Pennsylvania Office of Vocational Rehabilitation, which paid for the commercially-available lift equipment.

The Ohio AgrAbility Project was launched in 1995 as a partnership involving the Ohio State University Cooperative Extension Service and the Ohio Rehabilitation Technology Center. Project staff are working directly with 37 farmers and rural residents with disabilities, including Steve, a 23 year old cash grain farmer from the Toledo area who was seriously injured in a diving accident while swimming in his farm pond.

Although paralyzed from the neck down, Steve has a strong desire to return to the family farm and, if given the chance and technology, run his own business. AgrAbility staff are assisting Steve to achieve this goal by assessing his needs, designing new assistive technologies, and training him to safely use and maintain disability-related accommodations in farming. AgrAbility has helped make modifications on a six-wheel all terrain vehicle, to give him mobility on the farm; a lawn tractor, to enable him to start a landscaping business; and a New Holland tractor for use in farm operations. Steve has appeared on several syndicated television and radio programs, including the popular Ed Johnson's AgrAcountry, to raise public awareness about farming and disability and, in so doing, serve as a role model for other farmers with disabilities. For Steve, Ohio AgrAbility is the link that enables him to make his dream a reality - to become a more independent and productive member of society - through farming.

Since 1991, the Iowa AgrAbility Project has served 685 farm families and other rural Iowans affected by disability. Recently, the Iowa Vocational Rehabilitation Service contacted AgrAbility to arrange a home assessment for wheelchair accessibility and independent living for Frankie, a 31-year-old mother with paraplegia, whose home had been gutted by fire. AgrAbility staff coordinated the remodeling of Frankie's home to promote independence, including a kitchen with wheelchair-accessible counters and cabinets, a bedroom with exercise area, and low-maintenance concrete front entrance ramp. AgrAbility staff recruited neighbors to provide the expertise and labor needed for remodeling and repair, and Vocational Rehabilitation Services provided $3,000 for materials.

About four years ago, David Deihl, a farmer/rancher from the Helena, Montana area, developed a rare condition called transverse myelitis, which causes muscle weakness and control problems much like a spinal cord injury and required David a to begin using a wheelchair. Since 1992, David has contacted AgrAbility several times for assistance with modifications that enable him to continue farming and ranching. For example, David worked with AgrAbility staff to select the best designs for modifying his International 4-wheel drive tractor and John Deere combine. David and his brother, who is a good welder, used AgrAbility information on "homemade" solutions to make the simple modifications necessary for David to operate these vehicles independently. David now drives an extended cab pickup truck, and worked with AgrAbility to identify and select commercially available hand controls and a swivel seat, which allows David to load and unload his wheelchair.

As David slowly realized that he will not walk again, he asked AgrAbility for assistance with modifying the bedroom and bathroom in his home. AgrAbility staff worked closely with David and his wife, Arlene, to select home alterations promoting convenience and safety, including securing a used set of parallel bars for David to continue his physical therapy program at home.

A mid-Missouri farmer, hospitalized with a serious spinal cord injury, contacted Missouri AgrAbility staff to discuss his options for returning to his family's 300 acre livestock operation. AgrAbility staff began helping this farmer and his family while he was still receiving rehabilitation services in the local hospital, providing technical resources, product and service information, and direct assistance in making his home and farm wheelchair-accessible. Among the modifications recommended by AgrAbility: wheelchair ramps, tractor wheelchair lifts and hand controls, asphalt pathways, automatic gate latches, and all-terrain vehicle hand controls. These changes were instrumental in assisting this farmer to overcome mechanical and environmental barriers on his farm.

In Illinois, a sampling of recent AgrAbility Unlimited activities illustrates the wide range of clients, needs, and direct assistance that makes the AgrAbility program so valued and unique. Over the past several months, Illinois project staff:

- coordinated funding and construction of a standing platform lift for a small-acreage livestock and forage farmer with mobility and cardiac impairments.

- provided information and transitional help to an aging farmer who was blind as a result of a farm accident. AgrAbility staff identified audio resources and helped him learn to navigate a cart independently between his house and a woodpile in order to fetch fuel for his furnace.

- coordinated information for a middle-aged cash grain farmer who was diagnosed with Charcot-Marie Tooth, a progressive neuro-muscular disorder. Ongoing AgrAbility support will enable him to explore alternative careers over the next few years, as he recognizes the need to transition out of farming.

The AgrAbility Program strengthens rural America by investing in people who, despite having disabilities, are highly motivated to stay in food and fiber production. With project support, these individuals overcome disability-related barriers, work hard, and contribute much to the rural economy. Without support, such individuals might be forced out of farming into non-rural employment, underemployment, or joblessness.

The AgrAbility Program offers expert guidance on an array of practical, mostly low-cost, solutions to accommodating disability in agricultural and rural settings. It minimizes the likelihood that agricultural workers with disabilities will waste scarce resources on inappropriate approaches to solving disability-related problems or endanger themselves by using unsafe accommodations. Appropriate solutions save millions of dollars that might otherwise be lost to reduced productivity or spent on injury-related care.

The AgrAbility Program promotes dignity, self-help, and independence for farmers, ranchers, and other agricultural workers with disabilities. The program provides basic, personalized guidance on best methods for accommodating disability in agricultural production and the home. It uses farmers' ingenuity in problem-solving, facilitates peer counseling, and encourages neighbor-to-neighbor supports.

For example, Purdue University's Breaking New Ground Resource Center produced a videotape and training guide promoting rural business accessibility and compliance with the Americans with Disabilities Act. Although only a small portion of funds invested in this resource were from AgrAbility, those served by the project - farmers, ranchers, and farmworkers with disabilities - stand to gain a great deal from the elimination of barriers in rural businesses, such as banks, coops, hardware stores, cafes, and supermarkets.

The AgrAbility Program builds community networks in rural areas to mobilize grassroots and volunteer support, coordinate service delivery, and help public agencies better reach their rural constituencies. Networking enhances the scope and impact of AgrAbility and related assistance in ways that are frequently less costly, better suited to agriculture, and more creative than city-originated approaches.

The Subcommittee's continued confidence in the AgrAbility Program is justified by exemplary program performance. Since 1991, AgrAbility has:

- Provided direct on-farm assistance to 3,800 farmers, ranchers, and farmworkers with disabilities and their families.

- Provided information and advice to 9,000 persons with disabilities employed in agriculture and related occupations.

- Educated over 60,000 agricultural, rehabilitation, and rural health professionals on safely accommodating disability in agriculture.

- Recruited and trained more than 800 volunteers to assist agricultural producers with disabilities and their families.

- Reached approximately 7.9 million people through exhibits, displays, and demonstrations to increase awareness of the challenges affecting and resources available to people with disabilities who work in agriculture.

The National Society believes that the AgrAbility Program is a unique and valuable resource to the nation's agricultural workforce. It enables thousands of disabled farmers, ranchers, and farmworkers to contribute to America's bountiful harvest. It has the potential to assist and empower thousands more.

The National Easter Seal Society recommends that the AgrAbility Program receive a FY 1997 appropriation of at least $3.0 million. This amount would continue existing projects at a slightly higher funding level to enable them to address large areas of unmet need and permit start-up of a couple of new projects in currently unserved states. This recommendation is well within $6.0 million authorization set by the 1996 Farm Bill.

The National Easter Seal Society is proud to contribute to the ongoing success of the USDA Extension Service AgrAbility Program. As Subcommittee members, please act to ensure that this valuable extension service/disability organization partnership continues to serve rural Americans with disabilities and their families.

Thank you for considering Easter Seals' views on AgrAbility and recommendation that $3.0 million be allocated to the AgrAbility Program in fiscal year 1997. For additional information contact: Randall L. Rutta, National Easter Seal Society, at 202/347-3066.

NATIONAL OAT IMPROVEMENT COMMITTEE

PREPARED STATEMENT OF GREGORY SHANER, CHAIRMAN

Mr. Chairman, members of the committee, I wish to submit written testimony regarding the value of plant genetic resources for US agriculture and the role the federal government plays in maintaining and utilizing these resources.

Plant germplasm is the life blood of plant breeding. The genetic improvement of crops has contributed substantially to the greater efficiency of US agriculture and to the production of safe, cheap food for our citizens, with enough surplus that we can export agricultural commodities throughout the world. When plant breeders seek to improve a crop or remedy some defect through genetic manipulation, the first step is to find useful genes that can be bred into the crop. Genes do not exist on shelves in laboratories. They are found in living organisms, and notwithstanding recent advances in molecular genetic engineering, nearly all genes of agricultural importance for a crop are found in the crop species itself, or in closely related wild species.

Plant breeding in the major crops has been going on for almost 100 years. During this time, varieties have been developed to yield more, produce a better quality product, to be more tolerant of environmental extremes, and to resist diseases and insects. As agricultural technology and markets have changed, so have plant breeding objectives.

Resistance to disease is one of the major goals of plant breeding. Some of the earliest efforts in plant breeding were to develop varieties of crops that would resist disease. Management of diseases of grain crops does not lend itself to use of fungicides. The large acreage of these crops, and the relatively low value per acre, preclude expensive applications of fungicides. This leaves two other methods of disease management -- cultural practices and genetic resistance. Cultural practices, such as crop rotation, time of planting, and fertilizer management, can effectively control some diseases, particularly those caused by microorganisms that reside in the soil and infect roots. There are many other pathogens that are carried long distances by wind or insect vectors, and cultural practices are generally not effective in controlling these. Use of resistant varieties is a proven and effective method of controlling these airborne diseases. The rusts and mildews that ravaged crops regularly throughout history until the mid 20th century have been controlled much more effectively in the past 50 years than at any previous time. This is almost entirely through use of resistant varieties.

Pathogenic microorganisms are able to adapt to resistant varieties of crops. Disease control through use of genetic resistance is not as simple as it might appear, however. The microorganisms that cause plant diseases produce tremendous numbers of spores or other propagules. Mutations, even though rare on an individual basis, become commonplace in populations of microorganisms. Some mutations allow the pathogen to overcome the effect of resistance in the crop. A variety that was bred for resistance will usually lose its resistance over time. When a crop variety succumbs to a mutant strain of a pathogenic microorganism, breeders must find another gene for resistance, and incorporate this into agronomically adapted varieties to restore effective resistance in the crop.

"New" diseases are always appearing. Changes in agricultural technology often cause diseases that were heretofore minor problems to become major problems. Several diseases of grain crops have become serious problems with the advent of reduced tillage as a soil conservation measure. Scab of wheat and barley and gray leafspot of corn are good examples.

Germplasm collections are the source of new genes for disease resistance. Whether confronted with a new, more virulent race of a pathogen that overcomes existing resistance, or a new disease, germplasm collections are where plant pathologists and breeders turn for genes that they can incorporate into adapted crop varieties. Germplasm collections are national treasures of tremendous value. It is important to recognize that virtually none of the food crops in the US is native to this country. We cannot go out into nature and find the old land varieties and related wild species that are the source of new genes for plant breeding. We must obtain these from germplasm collections, or go to areas of the world where our major crop plants originated. For many of our important crops, including the small grain cereals, the area of origin is the Middle East, a region that is generally not open to plant exploration by western scientists.

The USDA maintains a large germplasm collection. Fortunately, the US already has large collections of major crop species and their wild relatives. These collections are maintained by the US Department of Agriculture, ARS. These collections are only valuable to the extent that they are studied, documented, and maintained. The collections are too large to be screened in their entirety every time someone wants a new gene. For example, the wheat collection contains about 40 thousand accessions, the oat collection 20 thousand, the barley collection 30 thousand, and the corn collection 25 thousand. It takes several years to evaluate the entire collection of any one of these species for a particular trait. Over the years, the collections have been systematically evaluated for many traits. As evaluations are completed, the data are entered into an electronic data bank, which is accessible to other scientists, who can then search for accessions with desired traits. Evaluation is a continual process. As new diseases become important or new races of pathogens arise, the collection must be evaluated toward these. Germplasm is not only a source of genes for resistance to disease and insects. For example, when the value of dietary fiber was revealed, a systematic evaluation of the oat collection for beta-glucan content was undertaken, and genetic variability for this trait was detected.

Research positions necessary for a healthy germplasm system. The National Oat Improvement Committee, a group made up of US oat researchers, has urged congressional support for three new positions with USDA, ARS that would deal with oat production and genetic improvement of oat. These are a position at the Cereal Rust Laboratory in St. Paul, MN, a position in small grains pathology to be located at Raleigh, NC, and a cytogenetics position at St. Paul, MN. These positions were intended to complement existing USDA, ARS programs in small grains research. We have learned that as part of a requirement to redirect funds within the agency, ARS proposes elimination of two positions that deal with small grain cereals -- a geneticist at the National Small Grains Collection in Aberdeen, ID and a pathology position at Griffen, GA. We urge that these two positions be retained, and that the new positions, particularly the position at the Cereal Rust Laboratory, be funded. All of these positions will contribute to the evaluation of germplasm and the transfer of useful genes to cultivated oat, wheat, and barley. They are essential for the continued well being of our plant genetic resources in this country.

NATIONAL POTATO COUNCIL

PREPARED STATEMENT OF JEFF RAYBOULD, VICE PRESIDENT

Mr. Chairman and Members of the Subcommittee, my name is Jeff Raybould. I am a potato farmer from Idaho and current Vice President for Legislative/Government Affairs for the National Potato Council (the Council). On behalf of the Council, we thank you for your attention to the needs of our potato growers.

The Council is the only trade association representing 10,500 commercial growers in 50 states. Our growers produce both seed potatoes and potatoes for consumption in a variety of forms. Annual production in 1995 was 442,531,000 cwt with a farm value of $2.8 billion. Total value is substantially increased through processing. The potato crop clearly has a positive impact on the U.S. economy.

The potato is the most popular of all vegetables grown and consumed in the United States and in the world. Annual per capita consumption was 140.2 pounds in 1995 up from 107 pounds in 1962, and is increasing due to the advent of new products and heightened public awareness of the potato's excellent nutritional value. Potatoes are considered a stable consumer commodity and an integral, delicious component of the American diet.

The Council Priorities for Fiscal 1997 Appropriations:

The National Potato Council strongly urges that the Congress: (1) support Agricultural Research Service (ARS) funding for potatoes at fiscal year 1996 levels and continue to include report language urging that the ARS work with the National Potato Council in determining priorities. Considering current budget constraints, it is critical that the ARS, working with potato growers, be able to adjust current research to meet agreed upon priorities. This would allow for better program streamlining and effectiveness; (2) appropriate additional funds over 5 years for a special grant under the Cooperative State Research Education and Extension Service (CREES) to accelerate national efforts to eradicate or manage late blight disease once a review of such a research initiative has been completed by USDA and support given for the continuation of the USDA-IPM initiative; (3) appropriate adequate funds to the Animal and Plant Health Inspection Service (APHIS) to continue the Golden Nematode quarantine and survey program, without which the industry would be subjected to possible export trade restrictions by importing nations; and (4) not restrict funding for the Market Access Program (MAP).

Agricultural Research Service (ARS) Funding

For fiscal year 1997, the National Potato Council seeks at least the 1996 level of funding for all programs along with flexibility by ARS for potato research priority projects which would include more research on late blight. The Council specifically urges that the Appropriations Committee report also include language directing ARS to continue to work with the National Potato Council in determining priorities. We also hope that you will encourage the ARS, as potato base research funds come up for review, to direct more of such base funds into late blight programs.

As you recall, the National Potato Research Proposal was the result of an intensive effort begun in 1984 between the Council and the ARS to identify national priority research issues of concern to the potato industry. Based on these identifiable research needs, the National Potato Research Proposal received initial funding from the Congress for ring rot diseases; early dying disease; marketing; aphids; potato beetle and varietal development.

The monies provided to the ARS have been greatly appreciated and the potato growers are starting to see results from this research program. We are getting feedback on research results back to the producer by having researchers speak at seminars and by making available to the potato industry a written summary of all research underway.

Potato growers recognize that, in order to remain a viable and competitive industry, we must constantly strive to improve production efficiency and market quality while reducing the use of pesticides. Through carefully planned research, we believe we can continue to offer an excellent high value product and maintain a viable and competitive U.S. industry in the United States.

The National Potato Council has agreed to work with USDA, EPA and FDA in what we call a National Stewardship Program. Our growers will work toward pest management practices that further reduce risk to humans and the environment. Flexibility in ARS potato research funds will greatly facilitate this effort.

It is important to note that representatives of the Council have held annual meetings with ARS officials, the most recent in December of 1995, to discuss the distribution and use of research funds. In response to this Committee's direction, the Council has worked closely with the ARS to ensure that the research conducted is meaningful and addresses industry problems in the most thorough, expeditious and cost effective manner. The Council looks forward to continuing its close partnership with ARS to maximize the use of these important funds as this subcommittee has directed. The Council has also been working with CREES on priorities for potato research and extension.

U.S. Potato Late Blight Emergency

The Council has become deeply involved with what began as a regional problem but is now a national problem -- late blight. The Environmental Protection Agency has been incredibly responsive to our late blight emergency, giving our growers the tools they need in the short term to combat late blight. At best, these measures are limited, non-preventive, and do not afford the necessary total control. Most production areas now have late blight disease. However, more focused late blight research is critical given the rapid spread of this disease and the ongoing concerns over chemical use.

According to reports compiled and submitted to the USDA by Dr. William Fry, conservative estimates of costs to potato and tomato growers from late blight are at $200 million. Detections have been reported in all major production states including Arizona, California, Delaware, Florida, Georgia, Idaho, Kansas, Maine, Michigan, Minnesota, North Carolina, North Dakota, New Jersey, New York, Oregon, Pennsylvania, South Dakota, Washington and Wisconsin. These include new strains of late blight recently introduced from Mexico which are difficult to control.

In order to deal with this emergency, there is a need for a national long term comprehensive research effort to find solutions for our potato and tomato growers.

In response to our request, USDA Under Secretary for Research and Education, Karl Stauber, has appointed an interagency team within USDA to analyze the late blight problem in the U.S. Under Secretary Stauber has begun a review of a national late blight proposal coordinated by Dr. William Fry and this proposal is the subject of a peer review by plant pathologists.

Dr. Stauber has further agreed to review current funding efforts to ensure that requests for new or redirected funding are not duplicative of current programs.

The Council will continue to work closely with USDA and will report periodically to the Congress on the progress of current research and, once USDA's reviews are completed, the need for new research efforts.

Golden Nematode Quarantine and Survey

The Animal and Plant Health Inspection Service assures that potatoes are protected from the importation of harmful pests and diseases and works with potato growers in assuring that potatoes meet phytosanitary export requirements.

The Golden Nematode is a significant pest which has been quarantined by USDA-APHIS for over 50 years and it is believed that this pest has been confined to a few locations in New York state. Its commercial hosts are potatoes, tomatoes and eggplants. It is important to our domestic industry and to our export market that this quarantine be continued and be effective. We are informed that federal budget reductions over the past several years have raised concerns over the future of this program. We understand that funds for this quarantine had been at $1 million but, in fiscal year 1997, only $444,000 of the $650,000 needed is budgeted under pest and disease management for this quarantine. We also understand that at least an additional $250,000 would be needed under the pest detection function to begin a national survey to certify that this pest is not in other areas of the U.S. We strongly urge that adequate funds be provided so that this quarantine can continue and avoid jeopardizing domestic production and export markets.

Market Access Program

The Foreign Agricultural Service (FAS) assists U.S. potato growers in the export market and administers funds provided to the Potato Promotion Board under the Market Promotion Program (MPP) renamed the Market Access Program (MAP) in the 1996 Farm Bill. MAP and its predecessor program have been particularly successful since 1986 in helping potatoes gain greater access and product recognition in foreign markets and is legal under the new GATT agreement.

Industry research shows that there is a direct correlation between receiving MAP funds and the ability to effectively market overseas. With MAP assistance, the Potato Promotion Board has developed long term markets for U.S. potato exports and created an outlet for surplus potatoes grown domestically, helping stabilize farm gate prices throughout the U.S. industry. As a direct result of promotional campaigns made possible by the pooling of industry monies and government MAP funds, U.S. potato exports have reached record volumes and values. Since 1986, total U.S. potato exports have increased three-fold in volume terms and almost six-fold in value, reaching an export value of over $585 million in 1995. In FY 1995, U.S. frozen potato exports alone were valued at over $250 million, a 36% increase over 1994 and almost a six-fold increase from a decade ago. With MAP, U.S. potato exports have expanded to new markets in Asia and South America and the industry has diversified its marketing activities to include consumer and trade advertising, public relations, trade seminars, restaurant and food service promotions, industry orientation tours, cooperative advertising, and merchandising.

During the recent Farm Bill debate, the U.S. potato industry in cooperation with a coalition of agricultural commodity groups fought to preserve the current MAP program. It was our industry's position then and remains our position today that substantive changes made to the MAP program by the 1993 Omnibus Budget Reconciliation Act and the 1996 Agricultural Appropriations Bill, which our industry supported, fully addressed the concerns raised by some in Congress about program efficiencies and management. Those changes imposed minimum contribution amounts for nonprofit participants, required that all participants certify that funds supplement but do not supplant industry funds, imposed a 5-year limit on the use of brand MAP funds in a given country, and gave priority funding to small U.S. entities and cooperatives under the branded program. Additional changes to the program made by the 1996 Farm Bill, which preclude direct MAP funding to large corporations and to foreign entities for foreign-produced products, ensure that the real beneficiaries of the MAP program will be U.S. farmers, cooperatives and U.S. agricultural products.

One remaining concern about the MAP program relates to annual funding levels, which have been reduced by Congress over the last several years and again this year by the 1996 Farm Bill. U.S. potato growers were discouraged that the 1996 Farm Bill reduced program funding from its previous authorized level of $110 million to

$90 million annually, and strongly believe that funding should eventually be restored to its previously high level of $200 million to take full advantage of the WTO-legal program.

Despite funding cuts, we nevertheless are encouraged that Congress recognized the importance of continuing this fully accountable and result-oriented program for U.S. farmers. At a time when U.S. agriculture is struggling to compete with subsidized foreign competition and foreign governments are increasing GATT/WTO-legal promotional assistance to their agricultural sectors, we encourage Congress to keep in tact and extend greater funding to the one USDA program that has truly helped U.S. agricultural products compete in the global marketplace.

This concludes my testimony, and I would be pleased to provide further information for the record.

NATIONAL RURAL HOUSING COALITION

PREPARED STATEMENT OF ROBERT A. RAPOZA, EXECUTIVE SECRETARY

Thank you, Mr. Chairman, for the opportunity to submit this statement for the public record. My name is Robert Rapoza, and I am the Executive Secretary of the National Rural Housing Coalition (NRHC). The NRHC is a national coalition of nearly 300 nonprofit and for-profit housing developers, state and local officials, and advocates for low-income rural households. For 26 years we have promoted the creation of affordable housing for families, farmworkers and other low-income people in rural areas. In this statement I would like to describe to you and the members of this Subcommittee the areas of concern we have for fiscal year 1997.

As you are aware, the last two years have seen a dramatic realignment in spending priorities for rural housing. The program level for section 502 loan guarantees was increased by more than 125 percent between FY 1994 and FY 1996, from $750 million to $1.7 billion. Over the same period, the section 502 direct loan program was pared back by 45 percent and the section 515 program was reduced by more than 70 percent. In total, direct funding for housing construction, repair and purchase programs—section 502 and 515, plus funding for very low-income housing repair, farm labor housing, housing preservation grants, site loans and credit sales—was reduced by almost 50 percent in two years. For the first time, the program level for rural housing loan guarantees exceeds the program levels for all of the construction and repair direct loans and grants combined.

The NRHC recognizes that FY 1997 will see a continuation of the difficult budget choices that faced this Subcommittee last year. It is our request, however, that the Subcommittee provide funding for the direct housing programs at no lower than the President's FY 1997 request, to reverse the decline in housing assistance for the families who most need your help. Moreover, we ask that you increase the funding on the section 514 and 516 farmworker housing loan and grant programs by $5 million each. Finally, we seek a restoration of funding for the Housing Preservation Grant program to its FY 1995 level of $22 million. We believe, first, that the housing programs have taken on more than a reasonable share of the cuts in discretionary funding in the last two years; second, that Congress needs to renew its commitment to meeting the housing needs of farmworkers, a critical yet poorly housed segment of our agricultural economy; and third, that housing preservation represents a cost-effective way of providing affordable housing by saving existing structures from deterioration.

Single Family Housing: Section 502 and Section 523 Self-Help

The section 502 program is the only federal housing program that targets assistance to low- and very low-income homebuyers in rural areas. Since the program's inception in 1949, the section 502 program has financed more than 1.8 million homes. The demand for this program is immense. The Rural Housing Service received approximately 79,000 applications for assistance during this last year and approved 37 percent of the applications it processed. Nonetheless, at the end of FY 1995 it still had 57,000 applications on hand. Assuming that even one third of the current backlog of applications are approved for funding, these approvals would more than use up the available funding for FY 1996 before the Rural Housing Service accepted a single new application.

The section 502 program level was $1.8 billion in FY 1994 and is $1 billion now—a two-year reduction of 45 percent. At the same time, no other dependable sources of affordable housing finance has risen up to fill the gap. Consider that the average income of a section 502 borrower is about $15,000, or 55 percent of the rural median household income. The loans that are available under the section 502 guarantee typically serve households with twice this income; they are too expensive for low-income families. Other federal programs, such as HUD's HOME program, are more targeted to urban and suburban areas. The state mortgage revenue bond programs generally cannot serve families with incomes less than 70 percent of the median. And none of these other programs offer the direct outreach through the network of county offices that the section 502 direct program does through the RHS field staff. In short, there simply is no alternative program that can reach the families in the nation's rural areas—including such high need areas as Appalachia, the Mississippi Delta and *colonias* regions of the Southwest—who are otherwise excluded from the American dream of homeownership.

Households in nonmetro areas are more likely to live in poverty than households in metropolitan areas; nonmetro housing stock, although improved in quality, is still more likely to be in worse physical condition or lack plumbing. In the high need areas, according to a recent report by the Housing Assistance Council, local officials report that up to half of the low-income people in their communities lived in housing with conditions that included "collapsing roofs, a lack of windows and insulation, holes in floors and walls, and rodent infestations". Among the nonmetro poor overall, their homes have rates of moderate and severe housing problems (10.7 and 4.5 percent, respectively) that rival those of the poor in central cities. One of every three poor homeowners lives in a mobile home rather than conventional, stick-built housing and, on the whole, the rate of homeownership in nonmetro areas actually fell during the 1980s.

All of these figures point to the fact that affordable and decent single-family housing has become harder to find in rural areas. The section 502 direct loan program is the nation's best single tool for reversing these trends. The FY 1997 request level of $1.32 billion is an increase of 32 percent over last year's level and it will help reduce the enormous backlog of housing assistance need.

Let me also note that section 502 can make homeownership affordable even to the lowest-income households; in fact, the Agency is required by statute to obligate 40 percent of the section 502 program funds to very low-income households. It can do this in part because of a program that leverages section 502 dollars with the homebuyers' own sweat equity, the section 523 Mutual and Self-Help housing program.

The section 523 self-help program demonstrates an emphasis on self-reliance that is not often found in federal housing programs. Section 523 pays the costs associated with bringing groups of low- and very low-income families together to build their own homes. These families contribute 65 percent of the labor toward building their own and each others' homes. They then receive section 502 mortgages for the remainder of the cost. Through their labor, they save between 10 and 25 percent over the cost of a contractor-built home financed with section 502 and they gain valuable job skills in the process. All this means that the savings from section 523 leverage federal dollars on a number of fronts and extend the reach of the section 502 program to more families.

The success of Delta Housing Development Corporation (DHDC), of Indianola, Mississippi, exemplifies the importance of the section 523 program. DHDC has provided technical assistance to low- and very low-income families in Sunflower County in the construction of nearly 400 homes. The median household income for Sunflower County is 80 percent of the state median income.

Many of the self-help participants moved out of dilapidated structures that lacked running water, had leaking roofs, no bath facilities, etc. Many families moved off farms and were employed in agriculture work, mainly seasonal farm work. Others were occupying privately owned substandard dwellings within municipalities.

DHDC recently completed the development of a 55 lot subdivision in Indianola that was used in conjunction with its self-help program. DHDC currently is completing the first phase of another subdivision in Indianola. This development will consist of a total of 58 lots. Construction financing for these two subdivisions is being provided by a local bank and the Housing Assistance Council of Washington. The bank is providing 80 percent of the financing and Housing Assistance Council is providing 20 percent.

DHDC has submitted another section 523 technical assistance application for Bolivar County, Mississippi. DHDC proposes to construct 32 homes under this grant. Financing for this development includes a $25,000 grant from the Local Initiatives Support Corporation for acquisition and predevelopment engineering costs. DHDC expects to receive some financing from the Mid Delta Empowerment Zone Alliance since the site is located in Mound Bayou, Mississippi, which is included in the Empowerment Zone. Another community, Rosedale, Mississippi is also within the Empowerment Zone and has a grant that will assist first time homebuyers. A total of 18 families within the Town of Rosedale will be self-help participants.

In short, this is a vital program to providing homeownership opportunities to needy families in Northwest Mississippi—the Delta.

The NRHC has estimated that over FY 1996 and FY 1997, the network of self-help housing groups will require $35 million to maintain its level of output and savings for the section 502 program. The Rural Housing Service has renewed grants that normally run for two years on a one-year basis, to fit the current year demand to the available appropriation. However, it will not be able to do so again next year if appropriations remain constant. Just to maintain the current network of self-help housing production, the Rural Housing Service will have to renew more than $23 million in expiring grants, even without having a reserve to meet additional needs: $14.8 million in renewals from the two-year FY 1995 grantees, plus $8.8 million in renewals from the one-year FY 1996 grantees. We therefore support the Administration's increase in program funding to $26 million for FY 1997, to better meet the continuing demand for self-help participation.

Housing Rehabilitation

The section 533 housing preservation grant program (HPG) also deserves increased funding. The program level was reduced by 50 percent last year, from $22 million to $11 million. Yet this program, more than any other rural housing program, provides the type of flexibility to local agencies that this Congress has supported through other measures such as the RCAP and the Rural Utilities Assistance Program. Under section 533, grantees may use HPG funds to design programs that meet the needs of the community. They may provide the funds as loans or as grants, to repair single-family homes or multifamily developments. This assistance extends the life of existing structures and helps preserve the community as a whole. Moreover, the grantees may recapture program income and reuse it through a revolving loan fund arrangement to repair additional low-income homes. We strongly urge Congress to restore the HPG to its FY 1995 level.

Multifamily and Farmworker Housing

With regard to the multifamily housing programs, the NRHC believes that a well balanced mix of rural housing programs must include rental housing along with homeownership and home repair. Given the extreme poverty of some rural areas, some families and elderly households find it more realistic to rent rather than own homes. The section 515 program meets this need. It has helped the lowest of the low-income families in communities across the country find decent and affordable housing.

We hope the Subcommittee will support the Administration's funding request of $220 million for FY 1997. This will help ensure that the current portfolio of developments can be brought up to housing standards. We recognize Congress' concern with program operations, and we will continue to work with you and with the Rural Housing Service on reform efforts. We fully support the reforms that the House passed in H.R. 1691, the Homesteading and Neighborhood Restoration Act of 1995, as well as RHS' efforts to improve program operations while statutory amendments are outstanding. We hope that this Subcommittee will show its support for the positive direction in which the program is moving by supporting the increase in funding to $220 million.

Finally with regard to the Rural Housing Service programs, I would like to raise the issue of farmworker housing, the section 514 and 516 programs. Last year, these programs took a total reduction of $1.815 million. As you consider the funding levels for FY 1997, I would like to highlight some facts about the farmworker housing program that argue for increased funding.

First, farmworkers are one of the most poorly housed populations in this country. Despite the fact that they play a vital role in harvesting crops and thus underwrite the agricultural sector of many states' economies, some 52 percent of all domestic farmworkers have incomes below the poverty threshold. This represents a rate more than four times the national household poverty rate of 12 percent, yet only 21 percent of farmworker households receive any form of public assistance, and rarely does the assistance include housing. Migrant farmworkers—those farm laborers who travel so far for work that they cannot return home on a daily basis—have even greater needs: 75 percent of them live in poverty and only 20 percent receive any form of public assistance. Moreover, since many migrant farmworkers face linguistic and other cultural barriers, their ability to find decent housing on their own is limited.

The section 514 loan program is the only national program to finance farm labor housing. The section 516 program provides grant money when the project is not feasible with loan funds alone. Together, however, they can pay for a mere fraction of the shortage of decent farm labor housing. The last national study, published in 1980, estimated that the nation needed to construct 800,000 units in order to house farmworkers in decent and sanitary conditions. Demand for the 514 and 516 programs is so high that the Rural Housing Service obligated all of its FY 1995 grant funds and all but $117,000 of the loan funds within the first two months of FY 1995. The total backlog of applications as of January 1996 included funding requests worth $148.8 million.

Many farm labor housing developers are trying to use these programs to leverage state and other monies to meet the need for housing, and we will continue to support those efforts. However, the states that have targeted their own resources to the farm labor community are by far in the minority. In the meantime, the needs are staggering. For example:

- A 1989 regional study found that the public and private farm labor housing in California, Oregon and Washington could house less than 30 percent of the migrant farm workers.
- In San Diego County in 1991, a Regional Task Force estimated that a majority of 31,000 seasonal farm workers lived in shacks, caves, lean-tos and automobiles during the peak of the harvest season.
- A 1994 survey in Ohio estimated a need of more than $4 million for housing and repair and other improvements for the state's 150 farm labor camps.

These conditions are representative of farm labor housing situations across the country. Until every agricultural state has the resources and will to help its farmworkers find decent housing, we ask Congress to ensure there is a fire wall of protection for farmworkers by providing additional funding for the programs this year: $20 million for the section 514 loan program and $15 million for the section 516 grant program.

Water and Wastewater

The last area I want to mention is the water and wastewater programs of the Rural Utility Service. These programs are vital both to ensuring that rural housing development can occur and for ensuring that existing rural units have access to affordable and sanitary drinking water and waste disposal facilities. The Rural Utility Service has helped thousands of rural households water and sewer service, but even as late as 1993 there were still 327,000 homes in nonmetro areas that lacked complete plumbing and 88,000 homes that had no access to either public sewers or private septic systems whatsoever. The EPA's latest estimates of capital needs for wastewater facilities in communities of less than 10,000 alone total $13.4 billion. Meanwhile, the greatest compliance needs for drinking water systems are among those serving communities of less than 3,300—these accounted for 86 percent of all Safe Drinking Water Act violations in FY 1993.

The budget authority for the water and wastewater programs was set at $487.868 million for FY 1996 as these loans and grants were consolidated with the solid waste management grants under the Rural Utilities Assistance Program. The Rural Utility Service used this authority to set combined water and wastewater program levels at $911.4 million. Because the combined BA was reduced from last year's BA for each separate program, however, the states' loan and grant allocation is approximately 30 percent lower than it was last year.

The NRHC supports the flexibility inherent in the Rural Utilities Assistance Program design, but we urge the Subcommittee to provide sufficient budget authority for this program so that the states have access to the quantities of funding they need to address their environmental concerns. The Administration has requested budget authority of $593 million to support combined program levels of $1.39 billion. The clear need for these most basic services justifies such an increase.

Mr. Chairman, the NRHC has recently completed briefing papers on many of these programs which I would be glad to forward to the Subcommittee. Thank you for allowing the Coalition this opportunity to offers its statement for the record.

NATIONAL RURAL TELECOM ASSOCIATION

PREPARED STATEMENT OF JOHN F. O'NEAL, GENERAL COUNSEL

SUMMARY OF TESTIMONY REQUESTS

Project involved:	Telecommunications lending programs administered by the Rural Utilities Service (formerly REA) of the U.S. Department of Agriculture
Actions proposed:	Supporting loan levels for FY 1997 in the same amounts as those contained in the FY 1996 Agriculture Appropriations Act (P.L. 104-37) for hardship, cost-of-money, Rural Telephone Bank and guaranteed loan programs and the associated subsidy to support hardship and Rural Telephone Bank loans at existing levels. Also supporting funding for an additional $100 million in new loan and grant authority designated for distance learning and telemedicine purposes as authorized in P.L. 104-127 the 1996 farm bill. Supporting an extension of the language removing the 7% interest rate cap on cost-of-money loans for FY 1997. Supporting continuation of the restriction on retirement of class A Rural Telephone Bank stock in FY 1997 at the level contained in P.L. 104-37.

Mr. Chairman, Members of the Committee:

My name is John F. O'Neal. I am General Counsel of the National Rural Telecom Association. NRTA is comprised primarily of commercial telephone companies which borrow their capital needs from the Rural Utilities Service of the U.S. Department of Agriculture (RUS) to furnish and improve telephone service in rural areas. Approximately 1000, or 71% of the nation's telephone companies borrow from RUS. About three-fourths of these are commercial telephone companies. RUS borrowers serve almost 6 million subscribers in 46 states and employ over 30,000 people. In accepting loan funds, borrowers assume an obligation under the act to serve the widest practical number of rural users within their service area.

Program Background

Rural telephone systems have an ongoing need for long-term, fixed rate capital at affordable interest rates. Since 1949, that capital has been provided through telecommunications lending programs administered by the Rural Utilities Service and its predecessor, the Rural Electrification Agency (REA). Telephone loans are made for telephone facilities related to the furnishing, improvement or extension of rural telecommunications at the local exchange level.

RUS loans are made exclusively for capital improvements, and loan funds are segregated from borrower operating revenues. Loans are not made to fund operating revenues or profits of the borrower system. There is a proscription in the Act against loans which would duplicate facilities and state authority to regulate telephone service is expressly preserved under the Rural Electrification Act.

Rural telephone systems operate at a severe geographical handicap when compared with other telephone companies. While almost 6 million rural telephone subscribers receive telephone service from RUS borrower systems, they account for only four percent of total U.S. subscribers. On the other hand, borrower service territories total 37 percent of the land area -- nearly 1½ million squares miles. RUS borrowers average about six subscribers per mile of telephone line and have an average of more than 1,000 route miles of lines in their systems.

Because of low-density and the inherent high cost of serving these areas, Congress made long-term, fixed rate loans available at reasonable rates of interest to assure that rural telephone subscribers, the ultimate beneficiaries of these programs, have comparable telephone service with their urban counterparts at affordable subscriber rates. This principle is especially valid today as the United States endeavors to deploy telecommunications "information superhighway" technology and as customers and regulators constantly demand improved and enhanced services.

At the same time, the underlying statutory authority which governs the current program has undergone significant change. In 1993, telecommunications lending was refocused toward facilities modernization. Most of the subsidy cost has been eliminated from the program. The subsidy that remains has been targeted to the highest cost, lowest density systems. Other loans are made at Treasury's cost-of-money or greater. In tandem with the reduction in subsidy support, overall loan levels have increased! More rural telecommunication infrastructure than ever before is being built. Program administrative costs have also been reduced and will be reduced further under the USDA reorganization enacted by Congress. Today, the telecommunications lending program of the Rural Utilities Service is lean and efficient. We are proud to support this committees' deficit reduction efforts without jeopardizing the important mission of modernizing rural telecommunications.

We are also proud to state once again for the record that there has never been a default in the RUS/REA telephone program! All loans have been repaid in accordance with their terms with interest. At the end of 1995, about $8 billion dollars in principal and interest had been paid by borrowers.

Need for RUS Telecommunications Lending Continues

The need for rural telecommunications lending is great today, possibly even greater than in the past. Technological advances make it imperative that rural telephone companies upgrade their systems to keep pace with improvements and provide the latest available technology to their subscribers.

As the rural telecommunications infrastructure continues to evolve, the benefits for rural life and the rural economy will be impressive. As existing distance learning programs prove, interactive optical fiber can provide education opportunities in even the smallest towns comparable to hiring many extra teachers. Using communications for medical diagnosis, monitoring and even treatment can help combat the shortage of doctors and the rash of rural hospital closings. Improved emergency services can save lives. For example, telephone systems are working to improve the ability of the 911 emergency system to recognize the location from which emergency calls originate to allow faster response.

Businesses like telemarketing and insurance can thrive in rural areas, and telecommuting can become a realistic employment option. RUS is already providing financing for digital switches, more fiber between central offices and for school and medical communications facilities, helping rural communities to reap the benefits of technology.

In addition, rural Americans continue the struggle to revitalize their rural economies. In light of the fact that both Congress and the President have indicated that telecommunications enhancement is a significant part of such development, the need for affordable capital to finance technological upgrading is greater than ever.

The explosive pace of technological development offers new opportunities for rural America. New systems can take advantage of major breakthroughs in what computers can do and how much capacity and speed can be made available for data, voice or video transmissions. But falling behind metropolitan areas in infrastructure development could spell a dim, non-competitive future for small, rural communities.

These rapid technological changes and federal policies of competition and deregulation in the telephone industry, as evidenced by the recent passage of the "Telecommunications Act of 1996", underscore the continuing need for targeted assistance to rural areas. The inherently higher costs to serve these areas have not abated. Regulatory trends towards encouraging competition among telephone systems increase pressures to shift more costs onto rural ratepayers. Interstate subscriber line charges of $3.50 have already shifted costs to customers. Pressures to recover more and more of the higher costs of rural service from rural customers to foster urban competitive responses will further burden rural consumers. And, as rural rates rise, small telephone systems will tend to lose confidence that they can recover the investments for costly network upgrades.

Expanded Congressional Mandates for Rural Telecommunications

Considerable additional loan demand is being generated and will be generated in the future because of two additional mandates for enhanced rural telecommunications standards contained in the authorizing legislation enacted in 1993 by Congress in P.L. 103-129.

First, Congress expanded the definition of a "rural area" to include towns up to 5000 population from the previous standard of 1500. It is not yet certain how significant this increase will be on borrowing demand but, it will surely increase since this change will have the effect of qualifying substantial additional geographic areas of the country for loans.

Second, as a prerequisite to eligibility for insured and Rural Telephone Bank loans, RUS, is in the process of approving a telecommunications modernization plan for each state which meet certain minimum statutory objectives for the deployment of modern telecommunications technology. Implementation of these plans will generate additional loan demand as rural telephone systems strive to meet these increased service objectives in the rural areas they serve.

The amount of loan applications pending at RUS is indicative of these increasing demands. The chart attached to my testimony shows the current state-by-state status of telecommunications loan applications at RUS. The overall amount stands at $311 million as of January 31st of this year. In addition, RUS personnel indicate that they expect significant increases in loan applications over the next few months. I know the Committee will agree that these figures, furnished by RUS, coupled with the expanded Congressional mandates amply demonstrate the ongoing need for this important program at the levels established in last year's appropriations act. They are:

5% Hardship Loans:	70,000,000
Cost-of-Money Loans:	300,000,000
Guaranteed Loans:	120,000,000
Rural Telephone Bank Loans:	175,000,000
Total	$665,000,000

Specific Additional Requests

- Removal of the 7% Cap on Cost-of-Money Loans

Again this year we are supporting removal of the 7% ceiling on cost-of-money loans. This Committee included language in this year's act to permit cost-of-money loans approved in FY 1996 to exceed the 7% per year ceiling contained in the authorizing act. We support an extension of this provision in the FY 1997 bill. The President's budget for FY 1997 also supports an extension of this provision. Long-term Treasury interest rates are again beginning to edge upward and in the event that they might exceed 7% in FY 1997 the cost-of-money loan program could be disrupted and loan levels not achieved since adequate subsidy would not be available to support the program at the authorized levels. For this reason, we believe it is important to incorporate this language in the bill again this year.

- Retirement of Class A Government Stock in the Rural Telephone Bank (RTB)

The Committee should continue the restriction on retirement of the amount of class A stock by the Rural Telephone Bank in FY 1997. The Bank is currently in the process of retiring the government's stock as required under current law. We believe that the process which began this year should be an orderly one as contemplated by the restriction contained in last year's bill to retire no more than 5% of the total class A stock in one year. This action was necessary because the Administration in last year's budget submission stated its intention to retire 51% of the class A stock unilaterally without the approval of Congress. Similar language is contained in this year's budget (see Appendix, Budget of the U.S. Government, FY 1997 at page 207). The Administration has not consulted with the authorizing and appropriations committees about this process concerning the effects of accelerated privatization on the Bank, its stockholders, and borrowers. In addition, the study required by the Congress of the Administration last year has not been completed. Under these circumstances, we believe it would be imprudent to retire more than 5% of the class A stock next year.

- Additional Authorization for Telemedicine and Distance Learning

This year's Farm Bill (sec. 2331 et seq., P.L. 104-127) authorizes a new loan and grant program for telemedicine and distance learning. The President's budget for FY 1997 requests funding for this important program. The purpose is to encourage and improve telemedicine services and distance learning services in rural areas through the use of telecommunications, computer networks, and related advanced technologies by students, teachers, medical professionals, and rural residents. Funds would be available to current electric and telephone program borrowers, service providers and end users. $100 million is authorized for each of the fiscal years 1996 through 2002. Loans would be made at the government's cost-of-money.

We believe this new program specifically designated for distance learning and telemedicine purposes is particularly important. Targeting funds in this manner should spur deployment of this new technology which is vital for the survival of rural schools, hospitals and the rural communities they serve. At the same time, the level proposed strikes a cost effective balance for the taxpayer and we support its funding for FY 1997.

Conclusion

Thank you for the opportunity to present our association's views concerning this vital program. The telecommunications lending programs of RUS work effectively and are accomplishing the objectives established by Congress at a minimal cost to the taxpayer.

UNAPPROVED REA TELEPHONE LOAN APPLICATIONS ON HAND AS OF JANUARY 31, 1996*

STATE	NUMBER OF APPLICATIONS	$ AMOUNT OF APPLICATIONS
ARIZONA	1	7,139,450
HAWAII	1	46,000,000
IOWA	1	2,921,000
ILLINOIS	1	2,370,600
KANSAS	1	1,620,000
MICHIGAN	2	3,003,700
MINNESOTA	2	11,565,100
MONTANA	1	15,058,200

NEW HAMPSHIRE	1	2,799,100
NEW MEXICO	1	12,500,000
NORTH DAKOTA	1	12,700,000
OKLAHOMA	2	29,373,850
SOUTH DAKOTA	2	28,667,100
TEXAS	4	53,733,950
VIRGIN ISLANDS	1	20,470,100
WISCONSIN	5	37,735,200
WYOMING	2	23,584,150
TOTAL	29	$311,241,500

*Source: Rural Utilities Service, U.S.D.A.

NATIONAL RURAL WATER ASSOCIATION

PREPARED STATEMENT OF THAD SHOWS

Mr. Chairman, thank you for allowing me, as Board Member for the Mississippi Rural Water Association and representative for the over 800 small communities with water systems in Mississippi to appear before this Committee today. In addition, I am here on behalf of the National Rural Water Association (NRWA) and rural water folks all over this country to thank you for the rural water and sewer grant funding program last year. These funds are being used and will be used to great advantage by many small water systems to improve the public health and strengthen local economic opportunity in rural America. Finally we want also to express our deepest appreciation for the help of the Committee in providing funding for our rural water Circuit Rider program. We are here today to request the continued support of you and the Committee for both the grant and loan funds and the Circuit Rider program funding.

Specifically, we are requesting for FY 1996:

Funding for the Rural Utility Service's Rural Community Assistance Partnership Rural Water and Waste Disposal grant program at $800 million. The USDA's FY 1997 budget request includes $661,560,000 for the program.

Funding for the Circuit Rider technical assistance program at $8.00 million to fund our existing the contract with RUS. The USDA's FY 1997 budget request includes $5,128,265 for the program.

Our primary reason for supporting additional funding in the water and sewer grant and loan program is that water and sewer are basic to rural public health. As environmental and health expectations rise, the need for safe drinking water and sanitary sewers have become a necessity for rural residents. Community water systems provide this service. USDA grants and loans allow rural residents to build systems and to repay the loans over an extended period. Without the current assistance from USDA, most rural residents could not initiate the construction of new systems and the expansion of existing ones. This funding allows more rural Americans to have safe water.

The need for grant and loan funds grows each year as the Federal government presses for higher and higher environmental standards on small water and sewer systems.

The goal of USDA has always been to bring safer drinking water to rural residents. However, now EPA has strengthened its role through both the Safe Drinking Water Act (SDWA) regulations and through the deadlines for compliance with the Clean Water Act. In addition, new regulations on Surface Water Treatment, Lead and Copper testing and the listing of 25 new contaminants this year are slowly overwhelming many small systems. To put it simply Mr. Chairman, federal requirements are increasing the cost of drinking water in rural America to the point that drinking water is becoming unaffordable in many rural towns.

The Congress has recognized this burden and is moving this year to remedy some of the problems caused by unfunded mandates and excessive federal regulations. This new emphasis on more responsibility and control at the local government level needs to replace the often suffocating constraints caused by the growing number of new federal requirements.

One alternative to increased federal regulations is on-site technical assistance. We believe that technical assistance operated by local governments provides more environmental benefits than increasing the size of the regulatory bureaucracy. As federal responsibilities are reordered, the rural water and sewer grant and loan program and the circuit rider water program in each state are an essential element to a return to greater local and state responsibility.

For example, in Mississippi, the Circuit Rider program assisted rural water systems with 400 technical assistance contacts an average of 35 technical assistance contacts per month. Approximately one half

of the contacts were made in response to direct calls for help from water system personnel. Circuit Riders have saved significant amounts of money for towns by preventing water loss, reducing the need for replacement of pipes, pumps and equipment, educating the towns on their most cost effective option to maintain compliance, and in working with systems to set adequate water rates in order to provide funds for continuous preventive maintenance. Often these savings are used to reach new customers or make improvements required by the SDWA.

During the past year, the Circuit Riders have made over 25,000 on-site types of technical assistance to rural water systems throughout America to provide hands-on help. We now know that having a national border-to-border program is having a dramatic impact on the upgrading of small water systems in those areas with the most serious water problems. It has proven to be the most important alternative to increased federal regulatory intervention in rural areas.

One issue that is of particular importance to rural water systems is the proposed reorganization of the USDA. The President's budget includes a request for funding the Circuit Rider program because we are in the middle of a five year contract for the program. As Congress moves to support more local control over governmental matters, the Circuit Rider is the first line for local self-help technical assistance. I have provided a list of all small communities assisted by Circuit Rider in all states last year. We strongly urge you to make the funding for the Circuit Rider program a top priority for the USDA budget.

Circuit Riders are on-site every day assisting towns with a variety of concerns.
Each town on the following list represents a contact in 1995.

ABERDEEN WATER-3200
ACL WATER ASSN-815
ALGOMA WATER ASSN-1547
ARLINGTON WATER ASSN-370
ARNOLD LINE WATER ASSN-1150
ATLANTA WATER ASSOC -225
AUBURN WATER ASSOCIATION-303
BALDWYN WATER ASSN-1200
BARRONTOWN UTILITY-1550
BEAR CREEK WATER ASSOC -4200
BEAT 3 GREENE WATER ASSOC -1100
BEAVER MEADOWS WATER ASSN-500
BEAVERDAM WATER ASSN-645
BELEN WATER ASSN-44
BEXLEY UTILITIES-330
BI-COUNTY WATER ASSN-310
BIG V WATER ASSN-1200
BILLY'S CREEK RURAL WATER ASSN-580
BLACK BAYOU WATER ASSN-400
BLUE LAKE WATER ASSN-100
BLUE SPRINGS WATER ASSN-465
BOGGAN RIDGE W/A-810
BOGUE BASIN WATER/SEWER-3000
BOGUE CHITTO WATER ASSN-285
BOYLE SKENE WATER ASSN-950
BRADLEY WATER-150
BROOKLYN WATER ASSOC -600
BUCKATUNNA WATER ASSN-1290
C & C WATER ASSOCIATION-550
CADARETTA WATER ASSN-162
CAMERON COMMUNITY WATER ASSN-130
CANNONSBURG-CHURCH HILL W.A.-280
CASON WATER DISTRICT-1144
CENTER RIDGE WATER ASSN-630
CENTRAL WATER ASSOC.-5500
CENTRAL YAZOO WATER ASSOC -2000
CITY OF ABERDEEN-3500
CITY OF BALDWYN-1200
CITY OF BAY ST LOUIS-3200
CITY OF BELMONT-806
CITY OF BOONEVILLE-2750
CITY OF BROOKHAVEN-3500
CITY OF BRUCE-1145
CITY OF CALHOUN CITY-900
CITY OF CARTHAGE-2000
CITY OF COLLINS-1000
CITY OF CORINTH WATER-6000
CITY OF DURANT-1235
CITY OF ELLISVILLE-1350
CITY OF EUPORA-1586
CITY OF FAYETTE-800
CITY OF HOLLANDALE-1250
CITY OF HOUSTON-1750
CITY OF INDIANOLA-3400
CITY OF ITTA BENA-1400
CITY OF KOSCUISKO-3200
CITY OF LEXINGTON-1000
CITY OF LUCEDALE-1040
CITY OF MARKS-1059
CITY OF MENDENHALL-1100
CITY OF MOORHEAD-800
CITY OF NEWTON-1620
CITY OF PASS CHRISTIAN-2790
CITY OF PETAL-3000
CITY OF PHILADELPHIA-3183
CITY OF PICAYUNE-5000
CITY OF PONTOTOC-2400
CITY OF PORT GIBSON-1500
CITY OF RIPLEY-2734
CITY OF SENATOBIA-2400
CITY OF STARKVILLE-7000
CITY OF VERONA-1397
CITY OF WATER VALLEY-1560
CITY OF WAVELAND-2460
CITY OF WAYNESBORO-1900
CITY POINT WATER ASSN-800
CLARKDALE WATER ASSN-1025
CLAYTON VILLAGE WATER ASSOC.-530
COLD SPRINGS WATER ASSN-225
COLES COMMUNITY WATER ASSN-280
COLLINSVILLE WATER ASSOC.-750
COMBINED UTILITIES-800
CONEHOMA WATER ASSN-855
COPIAH NEW ZION WATER ASSN-960
COPIAH WATER ASSOC.-2040
CRAWFORD WATER-381
CROOKED CREEK WATER ASSN-810
D'IBERVILLE WATER/SEWER-2800
DANCY WATER ASSOCIATION-73
DENNIS WATER ASSN-1400
DEXTER WATER ASSN-100
DIXIE UTILITY ASSN-1090
DORSEY WATER ASSOCIATION-714
DOUBLE PONDS WATER ASSOC.-1000
DUFFEE WATER ASSOC.-530
DUMAS PINE GROVE WATER ASSN-570
EAST QUITMAN WATER ASSOC.-1235
EBENEZER WATER ASSN-220
EDINBERG WATER ASSN-470
ELLISON RIDGE WATER ASSN-362
ERATA WATER ASSN-260
ETHEL RURAL WATER ASSN-200
FARMINGTON WATER ASSN-2250
FERN HILL WATER ASSN-30
FISHER FERRY WATER DISTRICT-1400
FMH WATER ASSOCIATION-945
FRANKLIN COUNTY WATER ASSN-1145
FREENY WATER ASSN-1700
FRENCH CAMP WATER ASSN-480
FRIENDSHIP WATER ASSOC.-610
GAUTIER UTILITY-6500
GLADE WATER WORKS-1050
GOLDEN WATER ASSN-560
GOOD HOPE WATER ASSN-695
GREENFIELD WATER ASSN-320
GREENWOOD UTILITIES-7500
HARMONY CENTRAL WATER ASSOC.-280
HARMONY RIDGE W/A-365
HARRISVILLE WATER ASSN-500
HAYES CREEK WATER ASSN-788
HILLDALE WATER ASSOCIATION-1500
HIWANNEE WATER ASSOC.-1420
HOLLY BLUFF WATER ASSN-70
HOLLYWOOD WATER ASSN-400
HOMESTEAD WATER ASSN-440
HOMEWOOD WATER ASSN-500
HOPEWELL WATER ASSN-213
HOULKA HOUSTON WATER ASSN-445
HOUSTON COMMUNITY WATER-325
HUB WATER ASSOC.-800
HUMPHREYS COUNTY WATER ASSN-1100
HWY 28 RURAL WATER ASSN-450
HWY 30 WEST WATER ASSN-394
IMPROVE WATER ASSN-743
INGOMAR WATER ASSN-500
J P UTILITY-1540
JEFF DAVIS WATER ASSN-685
JUMPERTOWN WATER-450
KEMPER COUNTY WATER ASSN-1900
KEOWNVILLE RURAL WATER ASSN-693
KILN WATER DISTRICT-570
KOKOMO SHILOH WATER ASSOC -625
KOSCIUSKO WATER & LIGHT DEPT-9000
LAMAR PARK WATER/SEWER ASSN-1050
LAWRENCE COUNTY WATER ASSN-730
LEESBURG WATER ASSN-1000
LEXIE WATER ASSOC -1020
LIBERTY ROAD WATER ASSOC.-80
LILY ROSE WATER ASSOC -1200
LINCOLN RURAL WATER ASSN-3050
LIVINGSTON ROAD WATER ASSOC.-150
LOOXAHOMA WATER ASSN-250
LORENA-LEMON-BURNS WATER ASSN-310
LORMAN WATER WORKS ASSN-500
MAGEE'S CREEK WATER ASSOC.-1775
MAGNOLIA RURAL WATER ASSOC.-900

MANTACHIE WATER ASSN-650
MANTEE WATER DEPARTMENT-159
MARYDELL WATER ASSN-390
MASHUALAVILLE WATER ASSN-166
MCADAMS WATER ASSOCIATION-250
MCCALLUM WATER ASSN-50
MCCOOL WATER WORKS-240
MCHENRY WATER ASSOC.-215
MCLAURIN UTILITY ASSOC -245
MCNAIR-STAMPLEY WATER ASSOC.-930
MERITTA WATER ASSN-650
MIDWAY PLEASANT HILL WATER ASSN-835
MONTEREY WATER ASSN-720
MOORE BAYOU WATER ASSOC -315
MOOREVILLE RICHMOND WATER ASSN-2634
MORRIS WATER ASSOC -295
MOSELLE WATER ASSN-750
MT OLIVET WATER ASSN-220
MT COMFORT WATER ASSN-1450
MT GILEAD-IMPROVE WATER ASSOC -850
MT OLIVE WATER ASSOCIATION-300
MUD CREEK WATER ASSN-640
N E. ITAWAMBA WATER ASSN-1430
N E PERRY WATER ASSOCIATION-700
N W KEMPER WATER ASSN-1900
NEELY UTILITIES-145
NESBIT WATER ASSN-610
NEW HOPE WATER ASSOC.-800
NEW LIBERTY WATER ASSN-148
NEW SITE WATER ASSOCIATION-390
NICHOLSON WATER SEWER-560
NORTH CENTRAL AMITE WATER ASSN-675
NORTH COVINGTON WATER ASSN-1125
NORTH EAST ITAWAMBA WATER ASSN-1363
NORTH HINDS WATER ASSN-2650
NORTH LAMAR WATER ASSOC.-2000
NORTH LEE WATER ASSN-2300
NORTH LUMBERTON WATER ASSOC.-1360
NORTH PIKE WATER ASSN-955
NORTHEAST JEFF DAVIS W/A-900
NORTHEAST PERRY WATER ASSN-720
OTUCKOLAFA WATER ASSN-121
OAK HILL WATER ASSN-1026
OKATOMA W/A-2350
OLD RIVER WATER ASSN-910
ORANGE GROVE UTILITY-3400
PALESTINE WATER ASSN-120
PALMETTO WATER ASSN-200
PANHANDLE WATER ASSN-435
PATTISON COMMUNITY WATER ASSN-910
PEARL RIVER CENTRAL WATER ASSN-2500
PHILADELPHIA UTILITIES-3185
PHILADELPHIA WATER ASSOC.-680
PLEASANT RIDGE WATER ASSN-1500
POPLAR CREEK WATER ASSN-128
PORTERVILLE WATER ASSOC.-907
POSSEUMNECK CARMACK WATER ASSN-398
POWERS WATER ASSOC.-790
PRIMROSE WATER ASSN-316
PROGRESS COMMUNITY WATER ASSN-1430
PROVIDENCE WATER ASSN-630
PUCKETT WATER ASSOC.-165
PUGHS MILL WATER ASSN-285
PUNKIN WATER ASSN-300
RANDOLPH WATER ASSN-376
RAWLS SPRINGS UTILITY-810
REEDTOWN WATER ASSOCIATION-825
ROCK HILL WATER ASSN-223
ROCKY CREEK WATER ASSN-500
RUNNELSTOWN UTILITY-600
S E. CHICKASAW WATER ASSN-600
S E. GREENE WATER ASSOCIATION-470
S.E. RANKIN WATER ASSN-1300
S W COVINGTON WATER ASSN-950
S.W LAUDERDALE WATER ASSN-430
S.W LEAKE WATER ASSN-735
S.W. JONES WATER ASSN-1325
SAUCIER UTILITY-385
SAVANNAH WAER ASSN-200
SHADY GROVE WATER ASSN-750
SHARON WATER ASSN-900
SHIVERS WATER ASSOC.-800
SHONGOLO RURAL WATER ASSN-435
SHORT COLEMAN WATER ASSN-15
SHUQUALAK BULTER-225
SILOAM WATER DISTRICT-1386
SIMPSON WATER ASSN-487
SMITH CROSSING W/A-1450
SONTAG-WANILLA WATER ASSOC.-450
SOSO WATER ASSOCIATION-490
SOUTH CENTREVILLE WATER ASSN-410
SOUTH WINONA WATER ASSN-265
SOUTHERN RANKIN WATER ASSN-1200
SOUTHSIDE WATER ASSOC.-30
SPARTA WATER ASSN-633
SPRINGDALE YOUTH WATER ASSN-179
STEWART WATER ASSN-353
STRAYHORN WATER ASSN-751
STRINGER WATER ASSN-1430
SUGAR CREEK WATER ASSN-131
SUN CREEK WATER ASSN-470
SUNFLOWER WATER ASSN-142
SUNNY OAKS WATER ASSN-200
SUNRISE UTILITY-1000
SWEET HOME WATER/SEWER-530
TALLAHALA WATER ASSOC.-2050
THORN WATER ASSN-445
THREE FORKS WATER ASSN-397
TISHOMINGO COUNTY WATER DISTRICT-650
TOCCOPOLA WATER ASSOCIATION-370
TOMBIGBEE WATER ASSN-480
TOPISAW CREEK WATER ASSN-960
TOWN OF ABERDEEN-3500
TOWN OF ANGUILLA-325
TOWN OF ARCOLA-270
TOWN OF ASHLAND-533
TOWN OF BALDWYN-1200
TOWN OF BEAUMONT-470
TOWN OF BELMONT-1500
TOWN OF BENTONIA-180
TOWN OF BLUE MOUNTAIN-508
TOWN OF BRAXTON-250
TOWN OF BROOKSVILLE-764
TOWN OF BRUCE-1084
TOWN OF BUDE-490
TOWN OF CALHOUN CITY-870
TOWN OF CENTREVILLE-800
TOWN OF CHUNKY-165
TOWN OF COFFEVILLE-504
TOWN OF COLDWATER-725
TOWN OF CRENSHAW-345
TOWN OF CROSBY-200
TOWN OF CROWDER-322
TOWN OF D'LO-200
TOWN OF DECATUR-480
TOWN OF DERMA-457
TOWN OF DUCK HILL-250
TOWN OF ECRU-605
TOWN OF EDWARDS-550
TOWN OF ENTERPRISE-265
TOWN OF ETHEL-234
TOWN OF FALKNER-725
TOWN OF FAYETTE-800
TOWN OF FLORA-565
TOWN OF FRENCH CAMP-500
TOWN OF GEORGETOWN-200
TOWN OF GLENDORA-75
TOWN OF GLOSTER-750
TOWN OF GOLDEN-600
TOWN OF HEIDELBERG-500
TOWN OF HICKORY-740
TOWN OF HOULKA-700
TOWN OF INVERNESS-430
TOWN OF JONESTOWN-350
TOWN OF JUMPERTOWN-450

TOWN OF LEAKESVILLE-675
TOWN OF LELAND-2600
TOWN OF LIBERTY-325
TOWN OF LOUIN-215
TOWN OF LOUISE-300
TOWN OF MANATCHIE-830
TOWN OF MARIETTA-200
TOWN OF MATHISTON-336
TOWN OF MCCOOL-240
TOWN OF MCLAIN-220
TOWN OF MEADVILLE-300
TOWN OF MENDENHALL-1100
TOWN OF MERITTA-300
TOWN OF METCALFE-400
TOWN OF MONTICELLO-760
TOWN OF MT OLIVE-500
TOWN OF MYRTLE-200
TOWN OF NETTLETON-914
TOWN OF NEW HEBRON-235
TOWN OF OLIVE BRANCH-2855
TOWN OF OSYKA-230
TOWN OF PACE-200
TOWN OF PACHUTA-135
TOWN OF PELAHATCHIE-620
TOWN OF PICKENS-530
TOWN OF POTTS CAMP-298
TOWN OF PRENTISS-805
TOWN OF RALEIGH-350
TOWN OF RICHTON-575
TOWN OF RIENZI-300
TOWN OF ROXIE-250
TOWN OF SALLIS-860
TOWN OF SALTILLO-1100
TOWN OF SANDERSVILLE-360
TOWN OF SEMINARY-155
TOWN OF SEMINARY-150
TOWN OF SENATOBIA-2036
TOWN OF SHANNON-600
TOWN OF SHERMAN-275
TOWN OF SIDON-175
TOWN OF SILVER CREEK-155
TOWN OF SMITHVILLE-810
TOWN OF SOSO-220
TOWN OF STATE LINE-210
TOWN OF STONEWALL-600
TOWN OF SUMMIT-650
TOWN OF SUMNER-200
TOWN OF SUMRALL-500
TOWN OF SUNFLOWER-325
TOWN OF TAYLORSVILLE-730
TOWN OF TCHULA-745
TOWN OF TISHOMINGO-300
TOWN OF TREMONT-300
TOWN OF TUNICA-1237
TOWN OF TUTWILER-430
TOWN OF UNION-870
TOWN OF UTICA-525
TOWN OF VAIDEN-330
TOWN OF VARDAMAN-490
TOWN OF WALNUT-430
TOWN OF WALNUT GROVE-340
TOWN OF WEBB-287
TOWN OF WEIR-694
TOWN OF WESSON-450
TOWN OF WEST-114
TOWN OF WOODVILLE-1100
TRAXLER WATER ASSN-300
TREMONT WATER ASSN-281
TRI COUNTY WATER ASSN-1100
UNION CHURCH WATER ASSN-345
VILLAGE OF GLENDORA-75
WARRENTON HEIGHTS UTILITY-400
WEBB UTILITY SYSTEM-400
WEST HILL WATER ASSN-140
WEST LAMAR WATER ASSOC.-2500
WEST MARION W/A-425
WEST TALLAHATCHIE WATER ASSN-190
WESTSIDE WATER ASSN-175
WHISLTER WATER ASSN-980
WHITE OAK WATER ASSOC.-235
WILK-AMITE WATER ASSN-654
WILLIAMSVILLE WATER ASSN-220
WILLOW GROVE WATER ASSOC.-570
WOODLAND WATER WORKS-220
YOCONA WATER ASSOCIATION-198
YOKENA JEFF DAVIS WATER ASSN-720

Rural Utility Service
Rural Water Grants and Loans

The grant and loan program is the backbone for rural public health. It is the program that small communities start with and count on in assembling financing for rural water and sewer systems. To best utilize USDA funds, small communities have gone to their state governments for help and in some cases have received new resources. However, in these and other cases it would be impossible to gain new financial support without the critical "seed money" that the USDA grant funds provide for projects in low income areas of each state. These grant funds are highly leveraged and the increase in the grant program is having a multiple impact on the improvement of small water and sewer systems throughout the nation.

This funding is vital to most small water systems because rural water districts do not have the legal standing to float bonds, levy taxes or seek other types of public financing. Private financing as a sole source has seldom been an alternative because of its high cost and consistent unavailability. With a repayment rate on USDA water and sewer loans of over 99%, this is the soundest government loan assistance program in the nation.

The Environmental Protection Agency (EPA) continuously cites the USDA rural water and grant loan program as the major source of funding assistance to help small rural systems meet SDWA requirements. The EPA has met with the USDA in an effort to ensure that adequate financial support is and will continue to be available to small water systems to meet additional requirements imposed by the Safe Drinking Water Act. This is of particular importance in that the cost to small water systems for SDWA compliance is estimated at $8 billion over the next twelve years. While much of this cost will be borne by the small water system customers themselves, the USDA program is the catalyst to generate the necessary funding. In effect, we have one federal agency imposing regulatory requirements and relying on another agency (USDA) to provide funds to support compliance. It is in rural areas which the USDA grant and loan program is critical to SDWA compliance.

September 1995 report from the U.S. General Accounting Office (GAO)

The USDA grant and loan program has helped fund almost 17,000 water and sewer projects serving more than 12,500 rural communities in the last 30 years, according to a September 1995 report from the U.S. General Accounting Office (GAO). The report, Rural Development: USDA's Approach to Funding Water and Sewer Projects, examines USDA's process for allocating and distributing loan and grant funds for these projects. These funds are distributed via USDA's Water and Waste Disposal (WWD) Program, which is "now the major source of federal funds targeted to water and sewer projects in rural areas," according to the GAO report.

Program Run at State, Local Level

The program is administered through USDA's Rural Utilities Service (RUS), better known to many as the former Farmers Home Administration. RUS reaches Communities through a network of state and district Rural Economic and Community Development (RECD) offices. The state offices are responsible for general oversight of the program. District offices administer the program at the local level and serve as the point of contact for communities. RUS distributes funds to the state RECD offices through an allocation formula that considers rural population, poverty, and unemployment-. Prior to this state allocation, RUS reserves a small pool of funds for emergencies, cost overruns, and other unforeseen problems. Twice a year, RUS takes back to this pool a portion of unobligated funds in state accounts. State offices also can request money from the pooled specific projects. At the state and district levels, the determination of loan and grant awarded on a project is based on median household income.

The GAO Reported Three Principal

> **USDA has helped to fund thousands of water and sewer projects for rural communities. Since 1965, the WWD program has over $20.4 billion in loans and about $17.3 billion in grants for rural water and sewer projects.**
>
> **The current allocation formula is easy to administer and many partially reflect states' needs and ability to pay. The report states that USDA's allocation formula is easy to understand and is based primarily on data that is readily available from the Bureau of Census and the Bureau Statistics. GAO also says that the formula partially reflects communities' needs for services and a state's ability to such services without federal aid.**
>
> **The award determination approach provides flexibility while resulting in differing funding decisions for similar communities. The report notes that "USDA state and district offices have considerable flexibility in determining the amount of grant assistance, if any, for individual projects."**

The GAO reported a default rate for RUS loans of less than 0.1 %. The delinquency rate for these loans is less than 2%.

PREPARED STATEMENT OF THE NATIONAL TELEPHONE COOPERATIVE ASSOCIATION

SUMMARY

Considering the current telecommunications demands being made by the Administration, Congress, and rural Americans, it is clear that the need for the Rural Utilities Service's (RUS) telecommunications lending has never been greater. In this context, the National Telephone Cooperative Association (NTCA) strongly supports the continuation of the RUS telecommunications loan program. For nearly 47 years, the RUS and its predecessor, the REA, has carried out its mission, of both providing and improving rural telephone service, with distinction. Appropriately funded, it will continue to do so well into the future. In short, RUS financing is critical to ensuring that rural Americans enjoy the benefits of the information revolution currently sweeping the nation.

INTRODUCTION

It is a pleasure to have the opportunity to discuss the current financing needs of the rural LEC industry. In light of all that is occurring on the telecommunications front, this discussion is urgently needed. NTCA is a national trade association representing nearly 500 small, rural cooperative and commercial telephone systems. These locally owned and operated LECs are situated throughout our nation. Over 80 percent of NTCA's member systems have benefited by the RUS/REA telecommunications loan program.

NTCA's members, like most of the country's independent LECs, evolved to serve the high cost rural areas of the nation. There can be no doubt regarding the high cost of providing telecommunications services to rural America. Just considering that these areas account for approximately 37 percent of the nation's geographic area is convincing enough. In addition, when we consider that rural subscribers account for only 4.3 percent of the nation's total population, it quickly becomes clear why rural America is so costly to serve.

Congress recognized this unique financing dilemma confronting America's rural LECs as early as 1949. It was in that year that it amended the Rural Electrification Act (RE Act) to create the REA telephone loan program. Congress planned for the future and fully understood that rural America's telecommunications financing needs would be ongoing. It charged the REA with the responsibility for making low interest loans to both "...furnish and improve..." rural telephone service.

In subsequent years, Congress has periodically amended the RE Act to ensure that the original mission of the program is met. In 1971, the Rural Telephone Bank (RTB) was created as a supplemental source of direct loan financing. In 1973, the REA was provided with the ability to guarantee Federal Financing Bank (FFB) and private lender notes. In 1993, the Congress established a fourth program lending facet, the REA Treasury-cost fund. Most recently, the reorganization of the U.S. Department of Agriculture facilitated consolidation of the Department's utility development programs through transferring the telecommunications loan and technical assistance programs of the REA to the Rural Utilities Service (RUS).

The infrastructure being deployed by a majority of rural LECs today is capable of providing state-of-the-art services such as two-way interactive video links. These services are changing the destiny of rural America. Through this technology, rural Americans are assured of improved education, health care access, and business and government services. The RUS's telecommunications loan program is financing a significant portion of such infrastructure enhancement.

RESPONSIBILITIES CONFRONTING INDUSTRY ARE SUBSTANTIAL

The success of the private/public partnership represented by NTCA's members' use of the RUS telecommunications loan program is substantial. This partnership boasts infrastructure of a highly sophisticated quality. With the assistance of RUS capital and technical standards, NTCA's members are leaders in modernizing their telecommunications systems. This financing partnership fosters a true commitment to rural residents.

With nearly 65 million people living in rural America, the challenge of providing modern telecommunications services is formidable. Compared to their urban counterparts, rural communities are faced with higher poverty rates, lower income levels, and higher costs of delivering modern infrastructure. Business development is often stymied by a lack of adequate resources placing rural residents in an awkward economic position. Attracting skilled professionals including doctors, teachers, and trained technicians is an added dilemma

With America set squarely in the midst of the "information revolution," rural areas face the problem of being left behind. While the explosive nature of technological change offers our rural communities genuine opportunities for economic and social progress, our rural areas require special attention related to telecommunications and information infrastructure.

These rapid changes are underscored by recent actions taken with the passage of the "Telecommunications Act of 1996." As we enact federal policies of competition and deregulation, the high costs associated with providing modern telecommunications services in rural areas will not diminish. Moreover, the mandated provisions for an evolving definition of universal service serves to emphasize the need for targeted assistance to rural areas.

Today, RUS borrowers average only 6 subscribers per mile compared to 37 per mile for the larger, urban-oriented, non-RUS financed systems. This results in an average plant investment per subscriber that is 38% higher for RUS borrowers. Without the availability of affordable capital financing, building adequate telecommunications infrastructure in rural communities will be untenable.

RUS: CONNECTING RURAL AMERICA TO THE FUTURE

Clearly, the RUS telecommunications loan program is helping extend the benefits of the information superhighway to rural America. RUS telephone lending creates public-private partnerships that work to create telecommunications infrastructure. These federal resources have stimulated billions of dollars of private capital.

For example, in fiscal year 1995, a subsidy of just $4.8 million generated $584.9 million in federal loans and loan guarantees. This amount leveraged an additional $2.63 billion in private investment. The net result is over $3.2 billion in rural telecommunications development. RUS borrowers will use these funds to provide modern services to 74,811 rural families, install over 8,000 miles of fiber optic facilities, and purchase 187 new digital switches.

The RUS is also making a difference in our rural schools, libraries, and hospitals. Since 1993, the RUS Distance Learning and Telemedicine (DLT) Grant program has provided 90 grants totaling over $27 million for funding interactive technology in rural schools, hospitals, and health clinics. This program has provided unprecedented educational opportunities for rural students and enhanced health care for rural residents.

As a result of this program, thousands of rural students will gain access to additional classes and advanced curriculum. The RUS reports that previously unavailable courses such as calculus, physics, chemistry, and accounting will be made available to 550 rural schools in 33 states. In addition, telemedicine facilities which provide cost-effective services such as 24-hour access to trauma specialist, continuing medical education, and distance consultations for pediatrics, obstetrics, cardiology, and oncology will be made available to 438 rural hospitals and clinics in 23 states. Simply stated, this critical program is allowing our rural citizens to overcome the isolated nature of their rural areas through the power of modern telecommunications.

To date, the RUS has made nearly $11 billion in loans for the improvement and expansion of telecommunications development in our rural areas. At the end of 1995, about $8 billion in principal and interest had been paid by borrowers. We are proud to claim that there has never been a loss for U.S. taxpayers through borrower default or abuse in 47 years of RUS telecommunications lending!

In 1993, this partnership agreed to a $31 million dollar cut in the name of debt reduction, and it agreed to a twelve year freeze in program loan levels while other programs grew by the rate of inflation. This partnership is committed to providing service to areas long neglected by others. Ultimately, this partnership can foster the development of modern telecommunications service to enable rural Americans to prepare for the economic and social conditions of the twenty-first century.

RECOMMENDATIONS FOR THE SUBCOMMITTEE'S CONSIDERATION

- RUS Telecommunications Loan Program:

Increasing demand for expanded telecommunications services and infrastructure upgrades indicates the level of need. The amount of loan applications pending before the RUS stands at over $300 million as of January 31, 1996. To allow for this demand to be met, NTCA recommends that the Committee consider the following RUS telecommunications loan levels for FY 1997:

5% Hardship Loans:	70,000,000	
Treasury-cost Loans:	300,000,000	
FFB Loan Guarantees:	120,000,000	
Rural Telephone Bank Loans:	175,000,000	
	$665,000,000	**Total**

These loan levels are the same as the current fiscal year's funding provided by this Committee and represent a genuine commitment to rural telecommunications needs.

- Removal Interest Rate Cap on Treasury-cost Loans:

We are also requesting that the Committee include language removing the 7 percent interest rate cap on Treasury-cost loans. This provision was included in this year's FY 1996 agriculture appropriations act, and it prevents the potential disruption of the program in the case where interest rates exceed 7 percent and insufficient subsidy cannot support authorized lending levels. It is a continuation of current policy and supports the viability of this critical loan program.

- Rural Telephone Bank (RTB) Privatization Issues:

As the RTB begins the process of statutorily privatizing during the course of the current fiscal year, the committee should consider the restriction of the amount of Class A government-owned stock which can be retired during the course of FY 1997. NTCA is amenable to this sensible policy. Any accelerated privatization scheme should be well conceived before implementation. At the very least, privatization should proceed in an orderly fashion with a full accounting of the various financial and legal implications involved. Cash reserves continue to grow within the RTB opening the possibility of accelerated privatization in the near future.

NATIONAL UTILITY CONTRACTORS ASSOCIATION

PREPARED STATEMENT OF JOHN R. HALL, PRESIDENT

Mr. Chairman and members of the subcommittee, I am John Hall, elected president of the National Utility Contractors Association. I have worked in the construction industry for more than 50 years, and in 1960 my partner and I started two companies, the San Antonio Road Boring Company and SACC, Inc., specializing in horizontal earth boring and sewer and water main construction. I am pleased to provide NUCA's recommendations for fiscal 1997 funding for the water and waste disposal construction programs administered by the Rural Utilities Service.

Fiscal 1997 Recommendation

Foremost, we urge you to support the administration's $661.5-million request for RUS loans, loan guarantees, and grants, which help rural communities finance drinking water and waste disposal systems. Without these grants or low-interest loans, new construction and system rehabilitation simply would not happen in many small communities. Traditional funding sources remain out of reach for many rural communities that have a limited tax base, a limited knowledge of financial markets, or lack the authority to issue public debt to pay for improvements.

Rural Infrastructure Needs

The documented need for capital investment is staggering and will continue to climb if the federal partnership with states and small communities is not adequately maintained. Rural communities often lack any type of water or waste disposal system, or they have dangerously old facilities that must be replaced or substantially rehabilitated.

I. *Wastewater*

The U.S. EPA 1992 Needs Survey provides the most recent projections of wastewater collection and treatment needs.[1] The survey showed more than $137 billion in wastewater collection and treatment needs over the next twenty years, including $13.4 billion for communities with fewer than 10,000 residents. New collector sewers ($5.2 billion), interceptor sewers ($2.5 billion), and secondary treatment facilities ($3.9 billion) account for most of rural America's documented wastewater infrastructure needs. The survey also showed that mid-Atlantic and southern states, including Texas and California, have the greatest small community needs for facility construction, replacement, or rehabilitation.

II. *Drinking Water*

Safe Drinking Water Act (SDWA) treatment requirements are a significant factor driving infrastructure costs and needs. Half of the capital investment needed to meet SDWA requirements is attributable to 50,000 small water systems that each serve fewer than 500 people.[2] Surprisingly though, SDWA requirements are not responsible for the majority of capital infrastructure needs. The larger share of capital needs is for existing water supply and distribution infrastructure. Moreover, needs estimates generally understate the extent of catch-up investment required to offset the effects of deferred maintenance and re-investment—especially in smaller communities.[3]

The U.S. Department of Agriculture recently completed an assessment of drinking water infrastructure needs.[4] This Water 2000 study found that as many as 8-million people have drinking water quality problems and approximately 1.1-million people lack indoor plumbing. An estimated $10-billion investment in drinking water infrastructure is needed to address these problems.

Rural Utilities Service Programs Pay Lasting Dividends

Our failure to invest in clean water infrastructure has serious public health, public safety, environmental, and economic consequences. For many people, particularly in rural America, contaminated water and the lack of fire protection are daily problems. And without adequate water and waste disposal facilities, small communities cannot attract economic development.

I. *Public Health*

Many of us take it for granted that we can turn on the tap and clean water flows out for drinking, cooking, or cleaning. After all, water is readily available, and the cost is relatively cheap compared to other natural resources. Although typhoid and cholera outbreaks no longer pose a serious threat to public health, we now face concerns posed by microbiological organisms and chemical contaminants. The USDA needs assessment cited earlier found that water supplies in rural populations are susceptible to contamination from farm runoff, including animal waste, herbicides, and pesticides. In 1993, we received a catastrophic wakeup call when contaminated water caused illnesses and deaths in Milwaukee, Wisconsin. Our nation's public health and the future well-being of our children depends on the availability of clean water.

II. *Economic Growth*

Before you can build homes and schools, establish new businesses, or hire employees, a dependable water delivery and treatment system must be in place. Not only does public investment in clean water facilities stimulate the overall demand for goods and services, it also provides necessary support for private-sector production and growth. The investment enhances private-sector profitability, increases labor productivity, and stimulates private investment in new plant and equipment.

These factors contribute to a better domestic economy, which means that American industry can also benefit from increased competitiveness in international markets. Public investment also spurs new tax revenues. A 1990 report published by NUCA showed that under a relatively conservative set of assumptions, a one-time investment in water and waste facilities of $2.5 billion is self-financing in less than a decade as a result of the expanded tax base.[5]

A 1992 study released by NUCA concluded that as many as 57,000 jobs are created for every $1 billion invested in clean water infrastructure. More than half of these are permanent jobs that pay good wages.[6]

III. *Environmental Protection*

Important environmental benefits result from the construction or replacement of dilapidated water and waste collection, treatment, and distribution facilities. The *Colonias* along the Texas border with Mexico, where residents draw water, bathe, and allow waste to flow into the same body of water, are just one example of what happens to water quality when communities do not have proper waste disposal and treatment facilities.

Old, tuberculated (clogged) pipes are another environmental hazard. More electricity is required at the pumping station to keep tuberculated pipes pressurized and water flowing. Leaking pipes also contribute to water pollution. In addition to being wasted, the treated water can seep into sewer pipes located below, with two results: 1) additional water flows to the treatment plant, which is unnecessarily costly, and 2) the treated water mixes with sewage and filtrates into the water table.

Conclusion

There is no question that the overwhelming need for water and waste disposal investment in rural communities outweighs current funding resources at all levels. For this reason, NUCA strongly supports the creation of a revenue-generating program targeted directly to clean water infrastructure. It is apparent that increasingly fierce competition for appropriations from general revenues necessitates a new dedicated funding source. The funding source must generate sufficient revenue to meet documented needs in perpetuity and must be tied to water use, consistent with the concept of a user fee. For example, broad-based user fees based on gallons of water consumed and/or wastewater discharged could be funneled into federal or state trust funds.

With respect to the fiscal 1997 appropriations process, we urge the subcommittee to accept the administration's $661.5-million request for RUS water and waste disposal loans, loan guarantees, and grants. The programs suffered substantial cuts in fiscal year 1996 and should be brought back in line with the $1.4 billion appropriation provided in fiscal 1995. NUCA is deeply concerned about the fiscal 1996 program cuts despite a $4.1-billion backlog of qualified applicants at the close of fiscal 1995.

We recognize that these are tough budget times and that our country's economic future is at stake if we don't do something about runaway and wasteful federal spending. As you develop an appropriations bill for fiscal 1997, we urge you to remember that clean water is one of the most basic public needs and must be continually maintained. What could be more important than providing running water and sanitary waste disposal systems to families who lack the basic amenities that many of us take for granted? Based on what I see every day in the trenches, the answer seems to clear to me.

Thank you for the opportunity to provide recommendations for fiscal 1997.

Endnotes

1. U.S. EPA, "Assessment of Needs for Publicly Owned Wastewater Treatment Facilities, Correction of Combined Sewer Overflows, and Management of Storm Water and Nonpoint Source Pollution in the United States," (Washington, D.C., 1993).

2. American Water Works Association, "Capital Requirements for Drinking Water Infrastructure," Proc. AWWA Annual Conference, Cincinnati, Ohio, June 1990, David Schnare and John Cromwell.

3. Id.

4. Study summarized in a publication of the National Drinking Water Clearinghouse, *On Tap*, "Water 2000 Assesses Drinking Water Needs, " (Spring 1996, Volume 5, Issue I).

5. Clean Water Council, "America's Environmental Infrastructure: A Water and Wastewater Investment Study" (Washington, D.C., Dec. 1990), Kenneth Rubin, Susan Jakubiak, David Aschauer, and Jeffrey Kaufmann, Apogee Research, Inc.

6. National Utility Contractors Association, "A Report on Clean Water Investment and Job Creation" (Washington, D.C., March 1992), Apogee Research, Inc.

NATIONAL WATERSHED COALITION

PREPARED STATEMENT OF RICHARD G. JONES, CHAIRMAN

MR CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE

The National Watershed Coalition (NWC) is pleased to present this testimony in support of some of the most beneficial water resource conservation programs ever developed in the United States. The Coalition recognizes full well the very difficult financial situation our nation faces. That makes the work of this Subcommittee very important. It also makes it imperative that the federal programs that are continued are those that provide real benefit to society, and are not programs that would be nice to have if funds were unlimited. We believe that the Small Watershed Program (PL 83-566) and the Flood Prevention Operations Program (PL 78-534) are examples of those rare programs that address our nations vital natural resources which are critical to our very survival, do so in a way that provide benefits in excess of costs, and are programs that serve as models for the way all federal programs should work

The National Watershed Coalition is an alliance of national, regional, state and local organizations that have a common interest in advocating the use of the watershed when dealing with natural resource issues We also support the use of total resource management principles in planning. We are advocates of both the Small Watershed Program and the Flood Prevention Operations Program administered by USDA's Natural Resources Conservation Service (NRCS), formerly the Soil Conservation Service (SCS) These resource protection programs deserve much higher priority than they have had in the past. Even in difficult financial times, their revitalization would pay dividends in monetary and other benefits, and jobs! The disastrous 1993 Midwest floods should have taught us something If one examines the Report of the Interagency Floodplain Management Review Committee that studied that event, we see that flood damages were significantly reduced in areas where PL-566 projects were installed The requests for disaster assistance were also less

The watershed as the logical unit for dealing with natural resource problems has long been recognized. PL-566 offers a complete watershed management approach, and should have a prominent place in our current federal policy emphasizing watersheds and total resource management based planning. Why should the federal government be involved with these watershed programs?

- o They are programs whose objectives are the sustaining of our nations precious natural resources for generations to come.
- o They are not federal, but federally assisted. They do not represent the continued growth of the federal government.
- o They are locally initiated and driven. Decisions are made by people affected.
- o They share costs between the federal government and local people. Local sponsors pay nearly 40% of the total cost of PL-566 projects.
- o They produce net benefits to society. The most recent program evaluation (1987) demonstrated the actual ratio of benefits to costs was approximately 2.2.1. The actual adjusted economic benefits exceeded the planned benefits by 34%. How many other federal programs do so well?
- o They consider and enhance environmental values. Projects are subject to the discipline of being planned following the National Environmental Policy Act (NEPA), and the federal "Principles and Guidelines" for land and water projects. That is public scrutiny.
- o They are flexible programs that can adapt to changing needs and priorities. Objectives that can be addressed are flood damage reduction, watershed protection (erosion and sediment control), water quality improvement, rural water supply, water conservation, fish and wildlife habitat improvement, recreation, irrigation and water management, etc. That is flexibility.
- o They are programs that encourage all citizens to participate.
- o They can address the needs of low income and minority communities.
- o And best of all - **they are programs the people like!**

The National Watershed Coalition commends the Congress for the support given these programs over the years, and hopes that the outcome of the FY 1997 appropriations process will enable this vital work to continue and expand as we seek to preserve, protect and better manage our nation's water and land resources. Every State in the United States has benefited from the Small Watershed Program. The Coalition and others are currently working with the NRCS to eliminate those projects from the "backlog" list that are not economically or environmentally feasible, and should no longer compete for scarce cost share dollars. This exercise should result in a residual of very high priority projects which are essential to the protection of our nation's resources.

In order to continue this high priority work in partnership with states and local governments, the Coalition recommends a FY 1996 funding level of **$300 million for Watersheds and Flood Prevention Operations, PL-566 and 534.** The allocation between these two programs is best left to the NRCS. We recognize that in these difficult financial times, the congress may not find it possible to provide that amount, but we also believe that we are not doing our job of helping you recognize the true need if we continually recommend the federal share of these needed funds be less. We would hope that everyone understand that these funds are only a part of the total that are committed to this vital purpose. The local project sponsors in these "federally assisted" endeavors, have a tremendous investment also. Additionally, the Coalition supports **$10.5 million for watershed planning, $13.0 million for River Basin Surveys and Investigations, and $38.0 million for the Resource Conservation and Development Program (RC&D).** The Coalition also supports **$6.6 million for the Forestry Incentives Program, and $200 million for the Environmental Quality Incentives Program (EQIP).** The EQIP program was just established with the passage of the 1996 Farm Bill, and the Small Watershed program is very complementary to it.

There is another consequence of the continued underfunding of the Small Watershed Program that is of concern. Marshland Watershed in Snohomish County, Washington, is a classic example of what can happen when disaster strikes, and the planned works are not completed because the federal share of the funds is not available. The Marshland Watershed Project is about 2/3 completed. The sponsors have all the land rights and their share of the funds needed to complete the project. The watershed was hard hit by flooding in November and December of 1995. The 1995 flood was near a record event, and was a federally declared disaster. It severely damaged much of the unprotected area, and another flood of that magnitude will do serious damage to those things already constructed and in place. We are dealing with issues of public safety and protection of the investment, both federal and local, already made. There are many other partially completed watershed projects, like this Marshland Watershed Project in Washington, in this country that need to be finished.

In addition to offering our thoughts on needed conservation program budget levels, we would like to suggest there are opportunities to further enhance one of the best, most flexible pieces of legislation ever passed, the Small Watershed Program, PL 83-566. A number of proposed amendments to this legislation were considered during the discussions of the 1996 Farm Bill. For whatever reason, those proposed amendments did not survive. The NWC would urge you, whenever the time is appropriate, to take another look at those proposals, particularly the idea of expanding the objectives that the legislation can serve to include more non-structural practices, allow the law to provide assistance in developing rural water supplies (without water there is no rural development), eliminate the current requirement that mandates twenty percent (20%) of the total project benefits be "directly related to agriculture" which has the unintended effect of penalizing projects in poor, small, rural communities, and continue to explore the idea of allowing the USDA Secretary to accept transfers from other Federal departments and agencies to carry out projects under PL-83-566, when it is to the advantage of all. We would also urge that as the issue of cost sharing rates is examined in the future, cost sharing rates be set for the natural resource purpose to be achieved, rather on the practices used to achieve those purposes.

The Coalition appreciates the opportunity to offer these comments regarding FY 1997 funding for the water resource programs administered by the Natural Resources Conservation Service. With all the "downsizing" that the NRCS has experienced, we would be remiss if we did not express some concern as to their ability to provide adequate technical support in these program areas. when we look at the expertise that NRCS has lost and not replaced, traditional fields of engineering and economics are but two examples, we see many states where the capability to support their responsibilities in these program areas is significantly diminished. This is a disturbing trend that needs to be halted. This downsizing has a very serious effect on state and local conservation programs. Local Watershed and Conservation Districts and the NRCS combine to make a very effective delivery system for providing the technical assistance to local people - farmers, ranchers and rural communities - in applying needed conservation practices. Many states and local units of government also have programs that provide financial assistance to land owners and operators for installing measures that reduce erosion, improve water quality, and maintain environmental quality. The NRCS provides, through agreement with the USDA Secretary of Agriculture, "on the land" technical assistance for applying these measures. The delivery system currently is in place, and by downsizing NRCS we are eroding the most effective and efficient coordinated means of working with local people to solve environmental problems ever developed. Our system and its ability to produce food and fiber is the envy of the entire world. In our view, these programs are as important as national security in terms of national priorities.

The Coalition pledges its full support to you as you continue your most important work. Our Executive Director/Watershed Programs Specialist Mr. John W. Peterson, who has forty years experience in this business, is located in the Washington, DC area, and would be pleased to serve as a resource as needed. John's address is 9304 Lundy Court, Burke, VA 22015-3431, and his phone and FAX no. is 703-455-4387.

Thank you for allowing the National Watershed Coalition (NWC) this opportunity.

Respectfully submitted by:

Richard G Jones

Richard G. Jones
Chairman
National Watershed Coalition
April 18th, 1996

Home address:
522 Winn Road
Salina, KS 67401, (913-827-2547)

NATIONAL WATER RESOURCES ASSOCIATION

PREPARED STATEMENT OF THOMAS F. DONNELLY, EXECUTIVE VICE PRESIDENT

Colorado River Salinity Control

The National Water Resources Association (NWRA) is a nonprofit federation of associations and individuals dedicated to the conservation, enhancement, and efficient management of our Nation's most precious natural resource, WATER. The NWRA is the oldest and most active national association concerned with water resources policy and development. Its strength is a reflection of the tremendous "grassroots" participation it has generated on virtually every national issue affecting western water conservation, management, and development.

The Colorado River provides important water supplies for 18 million Americans in the seven basin states of Arizona, California. Colorado, Nevada, New Mexico, Utah and Wyoming. These people live in the most arid portion of the United States and rely heavily upon the Colorado River for municipal and industrial water supplies, as well as for irrigation for 1.7 million acres of prime agricultural land. In addition, the Colorado River supplies water for half a million people and half a million acres of irrigated farm lands in the Republic of Mexico.

The seven Colorado River basin states and their water users have been working with Congress, the Executive branch of the federal government, and the courts for many years to assure a fair and effective allocation of the river's water supply. Salinity levels in the Colorado River have become a major issue with which the Colorado River Basin states have had to deal. Without implementation of salinity control measures, Colorado River salinity levels are projected to increase to about 1,000 mg/L by the year 2010. The economic damages currently experienced by municipal, industrial and agricultural users of Colorado River water in the Unites States alone amount to about $500 million per year and are expected to double by the end of the century.

In 1974, Congress enacted the Colorado River Basin Salinity Control Act (PL 93-320) to implement a 1973 salinity agreement with Mexico as well as a program for controlling the Colorado River's salinity level within the United States. The seven Colorado River basin states adopted, and the U.S. Environmental Protection Agency (E.P.A.) approved, numeric salinity control criteria for the river and a plan for implementing salinity control measures to maintain that criteria, while the basin states continue to develop their respective shares of Colorado River water. In 1984, PL 93-320 was amended to provide additional salinity control activities including a new voluntary, cost-shared, on farm salinity control program by the Department of Agriculture as well as a larger percentage of nonfederal cost sharing for Department of Interior programs so that the numeric criteria can be maintained in a cost-effective manner. In 1995, the law was amended to increase the Bureau of Reclamation's appropriations ceiling for construction of new salinity control projects. The amendment also authorizes Reclamation to implement new measures basin-wide one month after the submittal of a planning report to the appropriate committees of Congress for consideration.

Therefore, we urge the Committee to continue to implement the measures to control Colorado River salinity as authorized by law in order to maintain the numeric salinity criteria adopted by the seven Colorado River Basin states and approved by E.P.A. We also urge the Committee to maintain a specific line-item for the Colorado River Basin Salinity Control Program in the Agriculture, Rural Development and Related Agencies as well as the Energy and Water Development appropriation bills.

The Colorado River Basin Salinity Control Forum, the interstate organization responsible for coordinating the Basin states' salinity control efforts, has recommended that $12.8 million be appropriated for Reclamation's Colorado River Basin Salinity Control Program and $9.8 million for the Department of Agriculture in FY 1997. The National Water Resources Association strongly supports the Forum's recommendation and urges the Committee's support for this important program.

PREPARED STATEMENT OF NORTHWESTERN UNIVERSITY

Mr. Chairman and Members of the Subcommittee, thank you for the opportunity to submit this testimony, requesting continued Federal support for the Biotechnology Center Facilities Project at Northwestern University. Last year, President Henry Bienen, and in previous years, President Arnold Weber, submitted statements that discussed our project in detail. Prior to Federal funding, Northwestern's proposal was submitted to and approved by the United States Department of Agriculture (USDA) Cooperative State Research, Education, and Extension Service (CSREES) through a merit-reviewed facilities study. In brief, Northwestern proposed that the Federal Government enter into a partnership with the University by providing grants of $12 million to be matched dollar-for-dollar by the University. This $24.4 million project is designed to construct and renovate modern biotechnology facilities on Northwestern's Evanston Campus. I want to express my appreciation for the past grants supported by your subcommittee of $50,000 in FY91, $582,000 in FY92, $501,490 in FY93, $809,950 in FY94, $3,121,460 in FY95, and $1,325,020 in FY96, for a total of $6,339,920. I would also like to provide you with an update on this project and, given the expected sunset of the CSREES building and facilities program this year, to urge respectfully that you complete the remaining Federal portion of the project cost with a grant of $5,660,080 in FY97.

This project was conceived because, despite the high quality of the faculty performing biotechnology research at Northwestern, inadequate facilities limited our capacity to hire additional faculty, carry out state-of-the-art research, establish effective training programs, and accelerate technology transfer in the area of biotechnology. With the assistance of the Federal Government, this project is providing expanded and modernized facilities to meet these needs and the national needs for advancement in biotechnology. Research is being carried out to characterize the genetic basis for plant and animal growth and productivity, to identify new growth factors and novel hormones, to prevent viral and bacterial infections and disease, and to remediate hazardous wastes that pollute our environment. A recent grant from USDA will support new research in the environmental and food sciences. A biotechnology masters program and a biotechnology doctoral training program, funded by the National Institutes of Health, have been established and are operating successfully. With regard to technology transfer, the Biotechnology Center has hosted a course for members of academia on research in industry; a symposium on bioremediation (i.e., the use of microorganisms to degrade environmental toxins); a Summer Biotechnology Institute (i.e., a series of six full-day meetings that attracted overflow audiences with speakers and registrants from industry, government, and academia to discuss gene therapy, food biotechnology, pollution prevention, biotechnology policy and trends, strategic alliances in biotechnology, and entrepreneurship); and a National Science Foundation symposium on current issues in biotechnology and ethics.

The completion of the funding for this facilities project will also have a major impact on the continued growth and vitality of biotechnology because it will enable Northwestern to continue its strong commitment to developing the ideas, materials, and personnel essential for the next generation of discovery. According to the CSREES panel that reviewed our project, "This is an important facility which has the potential to increase the capacity at Northwestern University for research discoveries that could have a significant, long-term impact on U. S. agriculture." Continuing in partnership with the Congress and the USDA, we wish to see this project reach a successful conclusion and meet the high expectations of the CSREES review committee.

Northwestern continues to make great strides in biotechnology research, often in collaborations with industrial and academic scientists throughout the country. One of the areas in which Northwestern biotechnologists have made significant progress is structural biology. The following is a brief description of developments by Northwestern faculty that, I think, you and your colleagues on the Subcommittee will find informative.

o Dr. Alfonso Mondragon has solved the three dimensional structure of an enzyme that is essential for the replication of DNA. Drugs that block the action of this enzyme, and thus prevent the spread of bacterial infections, have been developed on a trial and error basis. Mondragon's structure of the enzyme is currently being used by scientists at SmithKline Beecham for the rational design of new drugs that can block the enzyme from functioning. As standard practice, antibiotics are added as a supplement to feed as a means of preventing bacterial infections and improving health in agricultural animals. However, because of resulting selection for bacteria that are resistant to the antibiotics used in feed, this practice has potentially adverse implications for the health of humans who consume these animals and their by-products. Mandragon's research promises the development of better feed supplements to prevent infection in animals and better medications to fight infection in animals, both improving health in animals and reducing side-effects in humans.

o Dr. Ted Jardetzky has been studying how the immune system recognizes and responds to foreign proteins. Jardetzky has solved the three-dimensional structure of the protein on the surface of cells that presents foreign molecules to the immune system. In some cases, this structure results in a normal immune response, but Jardetzky has also demonstrated how certain foreign proteins can cause an extremely harmful immune response. His studies have resulted in ongoing collaborations with scientists at the Harvard Medical School and the Baylor College of Medicine, and have attracted participation by Asterix Institute Inc., a start-up biotechnology company in Massachusetts. Immunization is widely used as a means of protecting agricultural animals from infectious diseases. Jardetsky's research is expected to result in better immunogens, increasing the health, growth-rate, and productivity of farm animals and protecting the health of humans who consume such animals.

Structural biologists at Northwestern are primed to make further major discoveries because the biotechnology facilities now under construction will enable these scientists to take full advantage of the Advanced Photon Source at the Argonne National Laboratory. The Advanced Photon Source, which is located a short drive from Northwestern University and is scheduled to become operational this year, will provide the world's brightest source of radiation and will help our scientists to see even deeper into the structures of important proteins and other molecules. We expect that the combination of the biotechnology facilities at Northwestern and the Advanced Photon Source at Argonne will produce a very strong synergy, leading to more rapid solutions to pressing problems in biotechnology.

There are also notable examples of progress at Northwestern in research related to cell biology.

o Dr. Frank Neuhaus is collaborating with government scientists on studies of the assembly in the bacterial cell wall. Construction of the cell wall is vital for the growth of bacteria, and some of the most common antibiotics, such as penicillin, act by interfering with this process. By understanding how the components of the wall are assembled, it will be possible to design novel anti-bacterial compounds -- an essential undertaking now that the overuse of many available antibiotics has led to the development of resistant strains of bacteria, causing disease in both animal and human populations.

o Dr. William Miller has been developing chemical toxicity tests that make use of cells grown in the laboratory. This work has begun with funding from Procter and Gamble. Although many substitutes have been proposed to replace animal toxicity tests, none has been widely accepted. Miller has now developed a system that can be used to measure toxicity under conditions that much more closely mimic the situation in the body of animals, essentially by allowing the cells to grow on special membranes so that they form the types of connections and interactions found in normal tissues. This system is also being used to assess the time needed for animals to recover from exposure to various chemicals.

The dramatic recent progress made at Northwestern in biotechnology has been widely recognized. Two of our scientists have just been given prestigious Bristol-Myers Squibb International Awards. Dr. Joseph Takahashi received the Neuroscience Award for his discovery of the first gene that controls biological rhythms in mammals, and Dr. Robert Lamb received the Infectious Disease Award for his discovery of a protein in the flu virus. Takahashi's work has profound implications for animal breeding and growth programs because animal reproduction and growth are tightly controlled by a biological clock that recognizes changes in the seasonal and day-night cycles. Lamb's studies have led to the realization that a small protein on the surface of the flu virus is responsible for pumping electrically charged atoms into or out of the virus, thereby enabling the virus to open up inside a cell. This step is necessary in order to convert the cell into a factory for producing more viruses, and to assemble the new viral parts, produced inside the cell, into infectious particles. Since flu is a leading cause of death in farm animal and human populations, a number of biotechnology companies have joined with Lamb to design drugs that block the action of this viral protein.

As these examples indicate, biotechnology at Northwestern is thriving. We are committed to continuing our efforts in biotechnology research, training, and technology transfer -- an area that is central to the mission of the University and essential in order to achieve our regional and national goals for agriculture and its related industries. The importance of our efforts for the nation as a whole has motivated us to submit this proposal for a partnership with the Federal Government. The value of biotechnology and the quality of our program led the CSREES external review panel to recommend our facilities project for Federal funding. We have worked closely with Congress and with the USDA during the past six years to implement this partnership, which has resulted in partial funding from the Federal Government and partial completion of our facilities project.

We acknowledge the constraints placed upon this Subcommittee as it attempts to make difficult choices regarding the USDA FY97 budget within the context of deficit reduction. However, given the worldwide competition in the area of biotechnology and the progress made at Northwestern on the basis of the Federal grants awarded to date, I would argue that completion in FY97 of Federal funding for

Northwestern's Biotechnology Center Facilities Project is a legitimate national priority for your Subcommittee, and one that will provide significant benefits to our nation and the American taxpayer. Thank you for the opportunity to present this request.

THE OCEANIC INSTITUTE

PREPARED STATEMENT OF BILLE HOUGART

Mr. Chairman, thank you for the opportunity to appear before you and for the Subcommittee's support of the development of the Center for Applied Aquaculture at The Oceanic Institute in Hawaii.

The continued growth of the U.S. aquaculture industry will be fostered by an enhanced national program of aquaculture research and development, the success of which will depend on the nation's leading freshwater and marine aquaculture research institutions.

These institutions must have research and technical personnel, laboratory infrastructure, large-scale testing facilities, and the education and training programs that will be necessary to carry out expanded and increasingly sophisticated programs of aquaculture research and development.

Thanks to your continued support of this concept, these services will be provided to marine and brackish water commercial aquaculture interests through the Center for Applied Aquaculture at The Oceanic Institute. The enhancement of The Institute's applied aquaculture research capabilities will put the United States in the forefront of marine and brackish water aquaculture development throughout the world for many years to come.

Currently under construction, these facilities will provide the nation's aquaculture industry with the capability to perform at a level which is expected in today's world of high technology.

The concept proposal submitted to the Congress in March 1987, outlined the development of the Center. Through this Subcommittee, $6.125 million were appropriated and an additional $5 million were appropriated from the State of Hawaii. Since then, the private sector has contributed over $1 million to the project. In FY 1994, $2.1 million were appropriated to continue the Center's development, and an additional $1.495 million were appropriated in FY 1995.

The original Development Plan describes the Center's operations, buildings, infrastructure and equipment. The proposed buildings and infrastructure in the Master Plan include an administrative complex, a central services building with offices, storage and utilities facilities, a laboratory/office building, ten research modules, a maintenance building, a saltwater supply, storage, distribution and disposal system, and parking lots, roads and sidewalks, and remote sites on the Outer Islands.

These improvements build on the investment already made and, upon completion, will allow the Center for Applied Aquaculture to realize its fully intended potential as a world-class applied aquaculture research and training center.

Mr. Chairman, we are requesting funding of $3 million in FY 1997 for the further development of facilities at the Center for Applied Aquaculture at its Makapuu and Outer Island sites. We are grateful for the Subcommittee's support of the Center for Applied Aquaculture. We respectfully ask for your assistance in completing the project.

PREPARED STATEMENT OF THE ORGANIZATION FOR THE PROMOTION AND ADVANCEMENT OF SMALL TELECOMMUNICATIONS COMPANIES

The Organization for the Promotion and Advancement of Small Telecommunications Companies (OPASTCO) seeks the Subcommittee's support for the loan levels requested in the President's FY 1997 budget for the telecommunications program administered by the Rural Utility Service (RUS). The requested program levels are:

Telecommunications Program	
5% hardship loans:	$75 million
treasury rate loans:	$300 million
guaranteed loans:	$120 million
Rural Telephone Bank (RTB) loans:	$175 million

OPASTCO also requests the Subcommittee's support for language that would remove the statutory 7 percent cap on treasury rate loans for FY 1997. Finally, OPASTCO requests that the Subcommittee support the telemedicine and distance learning grant and loan program, authorized in the Federal Agriculture Improvement and Reform Act of 1996, by funding it at adequate levels.

OPASTCO is a national trade association of more than 460 independently owned and operated telephone companies serving rural areas of the United States. Its members, which include both commercial companies and cooperatives, together serve over 2 million customers in 40 states. Well over half of OPASTCO's members are RUS or RTB borrowers.

Perhaps at no time since the inception of the RUS (formerly the REA) has the telecommunications program been so vital to the future of rural America. The telecommunications industry is at a crossroads, both in terms of technology and public policy. Great leaps in telecommunications technology in recent years will deliver on the promise of a new "information age." Congress' passage of the landmark Telecommunications Act of 1996, as well as fundamental statutory changes to RUS's lending program, will expedite this transformation. However, without continued RUS support, rural telephone companies will be hard pressed to build the infrastructure necessary to bring their communities into this new age, creating a bifurcated society of information "haves" and "have-nots."

Contrary to the belief of some critics, RUS's job is not finished. In fact, in a sense, it has just begun. We have entered a time when advanced services and technology -- such as fiber optics, digital switching equipment, enhanced emergency 911, telemedicine and distance learning applications, and custom calling features -- are an expected and needed part of a customer's telecommunications service. Unfortunately, the inherently higher costs of offering such services in rural areas has not abated. Rural telecommunications continues to be more capital intensive and involves fewer paying customers than its urban counterpart. In order for rural telephone companies to modernize their networks and provide their customers with advanced services at reasonable rates, they must have access to reliable and accessible financing.

Furthermore, modern telecommunications is central to the sustained economic and social vitality of rural areas. It is also a catalyst for development. Without a modern telecommunications infrastructure, rural communities would have no hope of attracting new businesses to reverse declining employment and out-migration trends.

While it has been said many times before, it bears repeating that RUS's telecommunications program is not a grant program. The funds loaned by RUS are used to leverage substantial private capital, creating public/private partnerships. For a very small cost, the government is encouraging tremendous amounts of private investment in rural telecommunications infrastructure. Moreover, there has never been a default in the history of the lending program.

The enactment of the Telecommunications Act of 1996 will only increase rural telephone companies' need for RUS assistance in the future. The forward-looking Act defines universal service as an evolving level of telecommunications services that the FCC must establish periodically, taking into account advances in telecommunications and information technologies and services. One of the principles for universal service established in the Act is that consumers in rural areas have access to advanced telecommunications and information services that are reasonably comparable to those services provided in urban areas at reasonably comparable rates. Long before the enactment of the 1996 Act, RUS has been the great facilitator of a dynamic universal service concept in rural areas, providing rural telephone companies with the financing to fund technological improvements. RUS now has an essential role to play in the implementation of the new law, as it will compliment new funding mechanisms established by the FCC and bring rural America closer to the federally mandated goals.

Working in tandem with the 1996 Act, the Rural Electrification Loan Restructuring Act of 1993 (RELRA) will further help to ensure the comparability of telecommunications service between urban and rural America. As a prerequisite to eligibility for insured and RTB loans, RELRA requires that every state have a modernization plan which provides a timeline for the improvement of the state's telecommunications network and that the purpose of every loan is consistent with achieving the requirements of the borrower's state plan. Implementation of these plans, which the RUS is currently in the process of approving, will generate additional loan demand as rural telephone systems strive to meet these increased service objectives in the rural areas they serve.

With regard to RUS's treasury rate loan program, OPASTCO supports the removal of the 7 percent ceiling on these loans for FY 1997. This Subcommittee appropriately supported language in the FY 1996 agriculture appropriations act to permit treasury rate loans approved this year to exceed the 7 percent per year ceiling contained in the authorizing act. Long-term treasury interest rates are again beginning to edge upward and were they to exceed 7 percent, adequate subsidy would not be available to support the treasury rate loan program at the authorized levels. Therefore, OPASTCO believes it is important that the Subcommittee ensure that this language is included in the appropriations bill again this year.

In addition to RUS's telecommunications program, OPASTCO supports adequate funding of the telemedicine and distance learning grant and loan program authorized in the recently enacted Federal Agriculture Improvement and Reform Act of 1996. Funds would be available to current electric and telephone program borrowers, service providers, and end users for the deployment of advanced telecommunications systems in rural schools, libraries, hospitals, and other medical facilities. Through this worthy program, rural students will gain access to advanced classes which will help them prepare for college and jobs of the future. Also, rural residents will gain access to quality health care services without traveling great distances to urban hospitals. The Agriculture Act authorizes $100 million for each of the fiscal years 1996 through 2002. Loans would be made at the government's cost-of-money, which should help to meet demand for the program in the most cost effective way. In light of the Telecommunications Act's requirement that schools, health care providers, and libraries have access to advanced telecommunications services, targeted funding for this purpose is essential.

CONCLUSION

Small independent telephone systems have played and continue to play an integral role in the development of a nationwide telecommunications network. The growth of this network into an information superhighway, as envisioned by policymakers, will help rural America survive and prosper in any market -- whether local, regional, national, or global. However, without the availability of low-cost RUS funds, building the information superhighway in communities that are isolated and sparsely populated will be untenable. By supporting the aforementioned RUS telecommunications programs at the requested levels, the Subcommittee will be making a significant contribution to the future of rural America at a negligible cost to the taxpayer.

PREPARED STATEMENT OF THE ORGANIZATION OF PROFESSIONAL EMPLOYEES OF THE DEPARTMENT OF AGRICULTURE

Mr. Chairman and Members of the Subcommittee, the Organization of Professional Employees of the Department of Agriculture (OPEDA) requests the assistance of the Congress in extending employment credit in the Civil Service Retirement System to an estimated 1,800 employees and former employees of the Department of Agriculture for service prior to January 1, 1984 in eleven cooperative Federal-State agricultural programs.

Background

Beginning in 1887 and continuing through the 1940's, the Congress routinely enacted enabling Statues establishing cooperative Federal-State programs, each having as its purpose the pursuit of major national objectives. National needs in the late 1880's dictated the choice by Congress to follow the cooperative Federal-State approach as the organizational arrangement for carrying out numerous Federal programs. In that era, national growth in population, trade, and commerce was rapid. Those changes demanded an increased Federal role to enhance national economic and social progress. At the same time, there was strong public resistance to Federal encroachment upon the affairs of state and local jurisdictions. Cooperative programs permitted Federal ojectives to be pursued effectively and efficiently, but respected the popular view concerning the role of the Federal government.

Federal statutes creating cooperative Federal-State agricultural programs contain several key organizational provisions:

> Unique state agencies, dedicated to Federal program objectives, have been established to administer cooperative programs.
>
> Federal appropriations and state matching funds are earmarked solely for cooperative programs to achieve the objectives defined in Federal statute.
>
> Close Federal supervision and monitoring of cooperative programs are imposed. Each state agency is required to maintain and make available to the designated Federal agency financial and work plans and work progress records.

Justification for Extended Credit

Civil Service retirement credit has not been extended to Federal employees and retirees in eleven cooperative Federal-State agricultural programs. (See Appendix A.) These programs were established by Federal legislation, supported primarily by Federal funds, and received close Federal supervision and monitoring. The organizational arrangement for these programs is the same as that of the two largest cooperative Federal-State agricultural programs that were extended retirement credit in 1954, the Cooperative State Extension Services employees and employees of the county committee activities established to carry out provisions of the Agricultural Adjustment Acts of 1933 and 1938.

Those benefitting from extending retirement credit for prior service in cooperative programs generally receive few or no retirement benefits for that service from either Social Security or a state retirement system. Prior to 1955, employees in cooperative Federal-State programs were not subject to Social Security. Many of those employed in these programs after 1955 did not earn minimum quarters of credit toward Social Security benefits. Most were in the employ of a state at a time when state retirement systems were poorly developed, vesting periods were long, and benefits were relatively small. Additionally, most who did vest in a State system did so some years ago and inflation has reduced base year salaries to a low level by today's standards.

Conclusion

Federal employees with service in cooperative Federal-State agricultural programs typically are older. Many of the older employees who would not elect to retire without extended credit would do so if there were to receive credit for that service. The earlier retirement of this group would provide long-term flexibility in planning and program adjustments and be helpful in government reorganization and work force reductions.

Extending retirement credit would be a just and equitable action for a group of deserving Federal employees who will not receive retirement benefits for periods of service in cooperative programs. The number of beneficiaries that would be created by extending retirement credit will not increase because new hires with service in cooperative programs will be required to participate in FERS. Fortunately, participation in FERS corrects the retirement deficiencies affecting employees of cooperative Federal-State agricultural programs who later become Federal employees.

Mr. Chairman and Members of the Subcommittee, OPEDA appreciates the opportunity to present this statement for the record and would be pleased to respond to any questions.

APPENDIX A

Cooperative Federal-State Agricultural Programs

1. State Agricultural Experiment Station programs funded under authority of the Hatch Act of 1887 as supplemented and amended.

2. State forestry research programs funded under authority of the McIntire-Stennis Act of 1962.

3. State agricultural research programs at the 1890 Land Grant Colleges and Tuskegee Institute in fiscal years 1967 and later.

4. State agricultural extension programs funded under authority of the Smith-Lever Act of 1914.

5. State programs of vocational education funded under authority of the Smith-Hughes act of 1917; including, but not limited to, instruction in vocational agriculture and home economics.

6. State programs of marketing service and research funded under authority of the Agricultural Marketing act of 1946, and predecessor programs; including programs to inspect, certify, and identify the class, quality, quantity and condition of agricultural products when shipped or received in interstate commerce.

7. State programs of suppression and control of plant and animal diseases and pests funded under authority of Acts of 29 May 1884, 20 August 1912, 4 March 1913, 4 March 1915, 6 October 1917, 6 April 1937, 31 January 1942, and 21 September 1944.

8. State programs of forest protection, management, and improvement funded under authority of the Act of June 7, 1924 to provide for forestland protection, reforestation and extension of National forests, and the "Forest Pest Control Act" of June 25, 1947.

9. State programs of emergency relief funded under authority of the "Federal Emergency Relief Act of 1933" and Acts supplementary thereto; including State rural rehabilitation corporation programs.

10. State veteran's education programs provided for in the title on "Education of Veterans" of the "Serviceman's Readjustment Act of 1944", including part-time instruction in on-the-farm training programs for veterans.

11. State programs of wildlife restoration and fish restoration and management funded respectively under authority of the Pittman-Robertson Act of 1937 and the Dingell-Johnson Act of 1950 and State programs of animal damage control funded under authority of the Animal Damage Control Act of 1931.

These are abbreviated, popular descriptions of the eleven programs.

PHARMACEUTICAL RESEARCH AND MANUFACTURERS OF AMERICA
PREPARED STATEMENT OF GERALD J. MOSSINGHOFF, PRESIDENT

I am Gerald J. Mossinghoff, President of the Pharmaceutical Research and Manufacturers of America, or PhRMA. PhRMA represents the country's leading research-based pharmaceutical and biotechnology companies, which discover and develop more than 90 percent of all new medicines. I appreciate this opportunity to present our recommendations on the Fiscal Year 1997 budget proposed for the Food and Drug Administration.

PhRMA urges your approval of the full budget proposed by the Administration for FDA. In particular, we strongly support the requested level of $911.3 million for FDA salaries and expenses, which includes $87.5 million in fees to be collected under the Prescription Drug User Fee Act of 1992. Funding for FDA professional staff resources constitutes the major portion of the Agency's budget. The work of qualified and dedicated staff is of critical importance in FDA's efforts to improve and expedite regulatory activities that promote and advance the health and safety of the American people.

We know that this Subcommittee confronts difficult budget allocation constraints in trying to provide adequate funding for the numerous Federal Programs for which it has appropriations responsibility. But we believe it is essential that requested Federal appropriations of $823.8 million for FDA salaries and expenses should be approved. This represents a modest $3.8 million increase over the current fiscal year, to help meet built-in staff cost increases. At this level, FDA will be able to continue to assess prescription drug user fees, which would be increased by $2.8 million over the current year, because the appropriations "threshold" requirements of the 1992 Act will have been met.

The Prescription Drug User Fee Act of 1992 was the result of an historic Government-industry agreement, under which FDA has received additional resources dedicated to making the new drugs and biologics review process more predictable and efficient, thereby making new safe and effective medicines available to patients more quickly. At the same time, however, the 1992 Act supports the maintenance of adequate staff resources in all FDA regulatory programs. It accomplishes this primarily by prohibiting the assessment of prescription drug user fees in a fiscal year unless overall FDA appropriations for salaries and expenses for that year, excluding these fees, are equal to or greater than a baseline of FY 1992 appropriations, adjusted for inflation.

If the FDA Fiscal Year 1997 budget request is approved by Congress, the authorized levels of user fees imposed on research-based pharmaceutical and biotechnology companies over the five-year statutory life of the 1992 Act will total $344 million. Prescription drug user fees currently account for over nine percent of FDA's total salaries and expenses budget -- almost double the percentage in FY 1993, the first year of the Act's operation.

The user fee legislation enacted in 1992 showed that FDA can be responsive to Congressional direction to approve new safe and effective medicines more expeditiously. Thanks in large part to user fees paid by pharmaceutical companies, FDA has made significant progress in bringing down new drug review times and in meeting performance commitments under the 1992 Act. For the 28 new drugs approved in 1995, the average review time was 19.2 months, down from 19.7 months in 1994. But this is still more than one year longer than the statutory standard enacted 34 years ago.

The problem becomes more sharply focused when you look at overall new drug development time. Due, in large measure, to cumbersome regulation, the drug development process is getting longer. In the 1960s, it took an average of 8.1 years to develop and gain approval for a new medicine. Today, according to a Tufts University study, it takes nearly 15 years. That is much too long. We must act now to reform the regulatory framework, or we will face even longer development times, and we will not be able to meet the challenges of the 21st Century.

In a formal statement last December, Commissioner David A. Kessler announced that "there is no drug lag" in the United States. His conclusion was based on an FDA analysis that looked at less than one-half of the 126 new drugs approved by FDA during the period of the study, 1990-1994. We have released data that do not support the Commissioner's opinion. If one looks at all of the new drugs approved by FDA as safe and effective over the period of the FDA study, a full two-thirds, 85 new drugs, were first approved abroad.

Moreover, we found that of the 28 new drugs approved by FDA in 1995, 18 of these, or 64 percent, were first approved abroad. Some of the 1995 approvals appear to be cases of extreme delay: In six cases, between 30 and 70 countries approved the products ahead of FDA.

Since all of these drugs were eventually approved by FDA as safe and effective, no additional margin of safety was achieved by the delays. Many of these foreign first approvals were important therapies for patients to have. One-third of the first approvals abroad in 1990-1995 were classified "priority," or a significant new therapeutic advance, by FDA itself.

These hard facts explain our strong support for basic concepts in comprehensive FDA reform legislation currently pending in Congress. The Senate bill, S.1477, introduced by Senator Nancy Kassebaum (R-KS), was ordered reported on March 28 by the Senate Labor and Human Resources Committee, by a bi-partisan vote of 12-4. On March 29, joined by 43 Republican and Democratic Members of Congress, Representative Richard Burr (R-NC) introduced H.R.3199, the "Drug and Biological Products Reform Act of 1996." We are hopeful that mark-up by the House Commerce Subcommittee on Health and Environment can be completed soon.

Industry and FDA have a common purpose -- to make safe and effective new therapies available to patients as soon as possible. Maintaining adequate appropriations for FDA is of critical importance in enabling the Agency to remain abreast of rapid scientific developments in the discovery of new medicines. Sufficient funds also are necessary if FDA is to fulfill significant new statutory responsibilities imposed by Congress over recent years for the general protection of public health and safety. PhRMA member companies are expected to invest a record $15.8 billion in new drug research this year -- 19 percent of U.S. sales and exports. Research-based companies in the United States are now developing several hundred medicines that could provide new cures for today's most intractable and costly diseases -- cancer, heart disease and stroke, major diseases of aging, AIDS and AIDS-related conditions, and neurological disorders. Industry and government must work together to assure that patients do not have to wait inordinately long for these cures.

I would like to conclude by noting that a PhRMA task force already is working with FDA to develop joint recommendations on the reauthorization of the Prescription Drug User Fee Act, which will expire or "sunset" by the end of Fiscal Year 1997.

REGIONAL AQUACULTURE CENTERS

PREPARED STATEMENT OF DR. KEVAN L. MAIN, DIRECTOR, CENTER FOR TROPICAL AND SUBTROPICAL AQUACULTURE

Thank you for the opportunity to submit testimony on behalf of the Regional Aquaculture Centers. We appreciate the Subcommittee's support for the Regional Aquaculture Centers over the past eight years. The total funding appropriated for all Centers during fiscal year 1995 was $4 million. I am presenting this testimony to strongly urge expanding that support to the authorized funding level of $7.5 million for the five regional aquaculture Centers.

The Regional Aquaculture Centers provide an extraordinary route through which nationwide expertise in aquaculture research, development, demonstration and training expertise can be coordinated and employed. The Regional Aquaculture Centers work to expand the commercial aquaculture industry in direct response to that industry's needs as outlined in the national Aquaculture Plan.

Aquaculture, in its broadest terms, is underwater agriculture rather than a new science or a mystical enterprise. Like land-based farming, aquaculture requires substantial research and development support to expand its technical and economic base and to reach its full potential.

The Regional Aquaculture Centers are positioned to take best advantage of regional aquaculture opportunities throughout the nation. The Regional Aquaculture Centers assist industry with development of regionally applicable production methods. The Regional Aquaculture Centers are programmatic rather than institutional and serve as a nucleus of information exchange and regionally based research and education.

In 1992, imports of foreign fisheries products reached $9.9 billion -- $5.7 billion of which was in the form of edible seafood products. At the same time, the United States exported on $3.7 billion worth of edible seafood products, which thus created a U.S. trade deficit of $2 billion dollars. In addition, the trend has been for the United States to import increasing amounts of its edible seafood from Asian countries. Increased domestic aquaculture production would only benefit the domestic seafood market -- and U.S. consumers -- by providing safe, high quality products at lower prices and by decreasing

U.S. reliance on imports. The Regional Aquaculture Centers program is helping this growth by providing the research and development support necessary for improved culture techniques.

The Center for Tropical and Subtropical Aquaculture, in operation since 1987, will initiate its ninth annual plan of work on April 1, 1996. I offer you the following highlights of the significant achievements and plans of Center-funded projects.

Disease Management in Hawaiian Aquaculture: The overall goal of this project is to develop and test new methods to control disease problems that occur on aquaculture farms in Hawaii. This year, the project is working to solve disease problems that have devastated Hawaii's shrimp culture and Chinese catfish culture industries, and screening imported tropical fishing for diseases.

Development of Threadfin Fry Production Technology: This project has overcome the major constraint to the culture of this high value marine fish -- cannibalism -- and developed a viable culture technology. In 1995, that technology was transferred to commercial aquaculture farmers. In 1996, investigators will work to perfect growout technology and transfer it to farmers.

Library Aquaculture Workstation: The Pacific Regional Aquaculture Information Service for Education, aptly nicknamed PRAISE, earns kudos for employing advanced computer and satellite technology to allow those in even the most remote Pacific Island nations to access the latest scientific information on aquaculture.

Aquaculture Extension and Training Support for the U.S.-Affiliated Pacific Islands: Five U.S.-Affiliated Pacific Island nations -- American Samoa, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, the Republic of Belau and the Republic of the Marshall Islands -- receive aquaculture seedstock, on-site aquaculture training and extension services from an aquaculture extension specialist. These services are vital to the development of the infant aquaculture industries in these locations.

Ornamental Aquaculture technology Transfer: This project has analyzed the feasibility of Hawaii farmers conducting commercial culture of ornamental species for the aquarium trade, is developing new culture techniques and is transferring the results to the aquaculture industry. As of this writing, at least nine Hawaii farmers have begun commercial production of ornamental species.

Production of CTSA Educational Extension Materials: This project will develop videos, manuals and extension fact sheets on the results of Center-funded projects. These materials will be geared to the commercial farmer and the lay reader.

Semi-Intensive Milkfish Fry Production and Technology Transfer: This project will produce milkfish (*Chanos chanos*) for commercial farms, transfer the culture technology to the private sector and examine the potential of cultured milkfish as live bait in commercial tuna fishing.

Understanding Gracilaria *Gall Syndrome:* This project is working to determine the cause and a means of preventing *Gracilaria* gall syndrome, a disease that has devastated commercial production of edible seaweeds in Hawaii.

The scope and variety of these projects demonstrate the breadth of the Center's contribution to development of the aquaculture industry. We believe an even greater contribution would result if the Regional Aquaculture Centers receive funding at the fully authorized level of $7.5 million. We request your assistance and support to bring the nation's aquaculture industry to its full potential.

Thank you again for the opportunity to submit testimony.

PREPARED STATEMENT OF LESTER W. MYERS, PRESIDENT AND GENERAL MANAGER, DELTA WESTERN, INC.

Mr. Chairman, we would like to thank you and other Members of the Subcommittee, for the opportunity to provide testimony in support of the Regional Aquaculture Centers. My name is Lester Myers. I own and operate a catfish farm near Inverness, Mississippi, and am President and General Manager of Delta Western, Inc., Indianola, Mississippi, the largest catfish feed mill in the United States.

For the past several years, I have served as Chairman of the Industry Advisory Council for the Southern Regional Aquaculture Center, and thus, have been actively involved with this program. Industry representatives are given the opportunity to identify urgently needed priorities, and jointly with our Technical Committee to make recommendations for selection of related projects to benefit producers, processors, feed mill operators and U.S. consumers.

Producers are impressed with the useful information from research funded by the Southern Regional Aquaculture Center, including work on nutrition, disease prevention, marketing opportunities, and many improved production and harvesting practices. The programs consistently strive to insure aquaculture products with highest quality for U.S. consumers. In addition, results from these programs help us meet competition from foreign imports. There is a constant need for new technology to reduce production costs to make aquaculture viable and profitable as a major agriculture commodity in the U.S. Already, results from the Regional Center programs are having a significant impact in helping achieve this goal.

This year, a project just developed by the Southern Regional Aquaculture Center will combine the expertise of scientists from universities throughout the region to develop techniques for preventing off-flavor from occurring in aquaculturally-produced fish. If fish develop off-flavor they will not meet processors' quality standards and cannot be marketed until flavor quality has improved. Thus, the economic impact of preventing off-flavor from occurring is very significant.

The Southern Regional Aquaculture Center is also initiating research to optimize nutrient utilization and waste control through diet composition and feeding strategies. Proper nutrition and feeding are critical issues in aquaculture because of their influence on fish growth and health, as well as the related impact on production costs, profitability, and assuring that aquaculture production practices are compatible with our environment. Because prepared diets constitute the largest variable cost in intensive fish production, considerable opportunities exist for reducing aquaculture production costs. This is of particular importance now since feed costs have increased significantly during the past several months.

In summary, representatives of the U.S. aquaculture industry are thoroughly convinced these Regional Center programs are highly valuable and productive. Additional new research findings will help insure future success for aquaculture production the United States. The authorized level of funding for the five Regional Aquaculture Centers is $7.5 million annually. The total annual appropriation for the Centers for FY 96 was $4.0 million, or $800,000 for each of the five Regions. We strongly request your consideration in the FY 97 budget to provide the full authorized level of $7.5 million for the existing five Centers to support these extremely important programs.

On behalf of the U.S. aquaculture industry, we would like to thank you for the opportunity to present testimony in support of the Regional Aquaculture Centers, and express our sincere appreciation for the support you have provided in previous years. Again, we would like to emphasize that significant benefits have already been provided from work conducted by these Centers and additional funding is urgently needed by our industry.

Thank you.

PREPARED STATEMENT OF DR. RICHARD SPENCER, LIMITED PARTNER, HAWAIIAN MARINE ENTERPRISES

Thank you for allowing me to submit testimony on behalf of the Regional Aquaculture Centers and the Center for Tropical and Subtropical Aquaculture or CTSA. My name is Richard Spencer, and I am limited partner in Hawaiian Marine Enterprises, a commercial aquaculture farm that raises edible seaweeds, clams and abalone. I have been a member of the CTSA Industry Advisory Council for eight years and have the privilege of serving as its chairman.

I am both a scientist and a businessman. Wearing both those hats makes me prize the Center's singular role linking the needs of industry with the expertise of science to further the development of aquaculture. The Center recognizes the necessity of integrating industry priorities and scientific research to ensure that its program directly meets the needs of commercial aquaculture producers.

Each year, the United States imports far more seafood than it exports. A high proportion of those imports come from countries that have little or no regulations regarding the safety of cultured aquatic animals or the manner in which wild stocks are harvested. The growth of the U.S. aquaculture industry ensures a reliable, safe source of high quality protein for the American diet and an alternative to the over-harvesting of wild stocks, which are being rapidly depleted. In addition, the growth of aquaculture will create new jobs and generate tax revenues, thereby strengthening the economy. However, commercial aquaculture is a mere toddler in terms of its development, and, like all toddlers, requires support and nurture to develop to its full potential.

The Center provides that support. Each year, the Center holds a meeting for commercial producers from throughout the region and asks them to define industry problems. Then the appropriate scientific experts are called upon to conduct research to solve those problems.

The routes to those solutions have been varied, including education, training, technology transfer, addressing disease issues and government regulations, marketing and economics, and revitalizing or initiating aquaculture activity throughout the Pacific. Most importantly, each route was mapped out in direct response to an industry need.

Although the Center's research projects have been underway for one to eight years, commercial producers in the region and throughout the nation have already reaped enormous benefits.

As a producer of edible seaweed, I am receiving direct benefits from a Center-funded project to find the cause and means of prevention of *Gracilaria gall* syndrome. The syndrome, a relatively new disease problem, attacks cultured seaweed, making it unsuitable for sale. It has nearly devastated seaweed production in Hawaii.

Another part of the Center's effort to address aquaculture disease management problems was the development of the Hawaii Aquaculture Module Expert System, or HAMES. HAMES is a computer software package packed with text, graphics and formulas that can help farmers diagnose diseases and syndromes of cultured tilapia. The program has been developed in versions that will run on PC-compatible computers in a DOS environment and in a Microsoft Windows environment and on Macintosh computers.

The Center-funded "Pacific Regional Aquaculture Information Service for Education" provides easy access to the latest scientific information on aquaculture. It also ensures that ease of access to individuals in the developing Pacific Island nations - where libraries may well be non-existent. The project provides a cost benefit of $20 for each $1 of Center funding.

Such progress in so short a time clearly illustrates that the Regional Aquaculture Centers' approach of spotlighting industry concerns is the right one, offering rapid effective results. The investment in the Regional Aquaculture Centers has yielded high returns thus far and will continue to do so. Expanding the funding capabilities of the Centers would afford even greater results.

However, the RACs have received only one funding increase of $50,000 per center in their 10-year existence. The funding allocation has lost much of its purchasing power. Increasingly, we are less able to fund the desired research at levels equivalent to the scope of the work. The cost of conducting science has increased. The number of worthy proposals has increased as the aquaculture industry in the Pacific region has grown. The funding, however, has remained flat in the case of the federal government, or has decreased dramatically, as in the case of the state of Hawaii.

With an essentially flat funding ceiling, the rising costs of research are eroding available funds and further reducing the amount of real dollars available for projects. This means that a project must be funded over several years to solve a problem that could possibly be solved in a shorter time span, given sufficient funds. The other RACs must be experiencing the same difficulties. I therefore request that you take this into account and approve the authorized full funding of $7.5 million for the Regional Aquaculture Centers program.

PREPARED STATEMENT OF DR. ROBERT RHEAULT, INTERIM EXECUTIVE DIRECTOR, NORTHEASTERN REGIONAL AQUACULTURE CENTER

Mr. Chairman and members of the Subcommittee: Thank you for the opportunity to speak on behalf of the Regional Aquaculture Centers. I firmly believe that the Regional Aquaculture Centers program and the aquaculture industry have developed to a degree where additional funding is warranted. The mission of the Centers is to enhance viable and profitable US aquaculture by supporting research, demonstration and education projects to benefit producers, consumers, service industries and the American economy. While I am mindful of the current fiscal constraints now operating in Congress, I believe a strong case can be made for increasing the appropriation to the full authorized level of $7.5 million.

I have been associated with NRAC since its inception in 1987, first as an oyster farmer, then as the Industry Chair of the Technical-Industry Advisory Council, and most recently as Interim Executive Director for the Center. I am extremely pleased to report that NRAC has evolved into a top notch research funding agency. The Center goes to great lengths to ensure that our research priorities are responsive to industry needs. We have established a strong network of industry, research and extension personnel and we have developed a protocol that brings together the best talent in the region on collaborative projects to address the needs of a rapidly growing and diverse aquaculture industry.

In the Northeast Region we are experiencing especially rapid growth in aquaculture in response to the collapse of the ground fishery. The Northeast Region encompasses a wide area, from Pennsylvania to West Virginia to Maine, and our industry has a diversity to match its geographical variety. NRAC serves growers of salmon, trout, striped bass, flounder, cod, oysters, clams, scallops and even algae. We provide extension, education and outreach services to twelve state aquaculture associations, dozens of colleges and hundreds of secondary schools. Meeting the needs of our diverse and growing industry is very challenging given the limited funds available. NRAC has marshaled a huge volunteer pool of talent to solicit, review and monitor our research and training efforts. Perhaps no other federal funds receive such a degree of scrutiny from such a highly qualified group of individuals.

Given the growth rate of our industry, the rate of job creation and the impacts that we are having in our local economies it is incumbent upon the federal government to support these activities at a greater level. With the collapse of the wild-harvest fisheries and the continued growth of both per capita consumption and total population we will be increasingly forced to rely on cultured fish to meet the seafood demand of our country in the years to come. We can either continue to buy increasing amounts from foreign countries (adding to our $5 billion dollar trade deficit in seafood products) or we can learn to grow more of our own.

NRAC is now in it eitgth year and our funded research and education projects are starting to yield tangible impacts within the region's industry. While I cannot put a dollar value on the impacts of this work, I would suggest that the investment by the USDA in aquaculture has yielded jobs and economic activity worth hundreds of time what was spent. In 1992 the Northeast Region industry had a farm gate value estimated at $143 million, employed 2,000 people directly and enjoyed an economic multiplier of 5X. Compare this with an annual budget for NRAC of $760,000. We could easily double our research expenditures without diminishing the quality of the research or increasing our administrative costs.

Industry values the work at the Center now more than ever before. The challenges before us are many, and pressures from the global marketplace are pushing us to solve them quickly. We have the talent, the infrastructure, the political will and the economic imperative. We should move now to bring our research programs up to par with those of our competition abroad. I sincerely hope that your committee will be able to reorder your priorities to free up additional funds to support the important work at the Regional Aquaculture Centers.

PREPARED STATEMENT OF DR. TED R. BATTERSON, DIRECTOR, NORTH CENTRAL REGIONAL AQUACULTURE CENTER

Thank you Mr. Chairman and Members of the Subcommittee for allowing me this opportunity to submit testimony on behalf of the Regional Aquaculture Center Program. We are truly appreciative of the Subcommittee's support for this program over the last nine years. Funding appropriated for the Regional Aquaculture Centers in fiscal year 1996 was $4 million. I am submitting this testimony to urge you to increase the support for the Centers to the fully authorized level of $7.5 million for fiscal year 1997.

The mission of the Regional Aquaculture Centers is to support aquaculture research, development, demonstration, and extension education to enhance viable and profitable U.S. aquaculture production which will benefit consumers, producers, service industries, and the American economy.

The U.S aquaculture industry continues to be one of the fastest growing sectors within U.S. agriculture Production has increased 113% in the 10-year period from 1984 to 1993. Production in 1993 reached 716 million pounds and generated approximately $810 million for producers. Final sales value for 1993 were estimated to be $5 billion; direct and indirect economic impact was estimated at $8 billion. Yet, anticipated growth in the industry, both in magnitude and in species diversity, continues to fall short of expectations.

Five Regional Aquaculture Centers have been established in response to Congressional legislation. The North Central Regional Aquaculture Center (NCRAC) came into existence in February 1988. It serves as a focal point to assess needs, establish priorities, and implement research and extension educational programs in the twelve state agricultural heartland of the United States which includes Illinois, Indiana; Iowa, Kansas, Michigan, Missouri, Minnesota, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. NCRAC also provides coordination of interregional and national programs through the National Coordinating Council for Aquaculture. The council is composed of directors of Regional Aquaculture Centers and is chaired by a representative of the U.S. Department of Agriculture.

The fertile North Central section of the country produces abundant grains and soybeans that can be processed for fish feeds. We also have spectacular water resources for aquaculture within our boundaries These include U.S. portions of four of the five Great Lakes, and rivers and streams that make up the Missouri, Ohio, and Upper Mississippi River drainages. The majority of the 61 million people residing in this region are concentrated on these water bodies. They have a long tradition of using fish as a source of protein in their diets

In 1994, an estimated 927 million pounds of fish and shellfish were consumed by residents of the North Central Region. On the supply side, probably less than 5% of regional consumption can be accounted for by commercial capture fisheries and aquaculture ventures from our lakes and rivers. Consequently, fish consumption in the North Central Region was a major factor in the $3.5 billion U.S. trade deficit in edible fishery products reported by the U.S. Department of Commerce for 1994.

I would like to suggest that the time is clearly at hand to move aggressively to increase regional aquaculture production. We also need processing technology and market development programs to make use of new and non-traditional aquaculture species and products.

The aquaculture community of the North Central Region is very appreciative of the steps Congress has taken to improve our fish supplies and reduce the trade deficit in fish products. USDA's Regional Aquaculture Center Program is one such initiative. NCRAC works with the other four centers on an integrated approach to a well developed and sustainable aquaculture industry in the U.S.A. and its territories. Programs of the centers are driven by needs of regional industries, articulated through strong Industry Advisory Councils. Top-notch teams of research and extension specialists from universities and public agencies in the North Central states began executing plans of work to solve problems of the industry in May 1989. Work is accomplished using in-place people and facilities. No expenditures are made on brick-and-mortar or institutional overhead. NCRAC has funded a number of projects involving numerous researchers, extension specialists, and collaborators from universities, public agencies, and the private sector. Projects on the culture of trout, hybrid striped bass, walleye, yellow perch, and sunfish have been the thrust of the program, including the economic viability of such aquacultural species. Work on crayfish, baitfish, and aquaculture waste management have also been undertaken. Aquaculture specialists within USDA's Extension Service are making information from these projects available in the region and across the country through a variety of delivery systems, including an aquaculture network information center on the Internet (AquaNIC; http://www.ansc.purdue.edu/aquanic/) and satellite teleconferencing.

While a good start has been made to serve needs of the industry and consumers, additional regional problems of high concern are left unattended. Environmentally sound cultural practices, least-cost nutrition for newly emerging species, fish health, and food safety are among them. On hold, is a large pool of expertise in our publicly funded universities and agencies that can deal with these and other concerns facing the aquaculture community.

Mr. Chairman, and Members of the Subcommittee, thank you for your support of the Regional Aquaculture Center Program. Funding over the past years has been put to good use in this program. We respectfully request that funding at the authorized level of $7.5 million be provided so that this important program can conduct the full range of activities necessary for development of the industry and continued reduction of our large trade deficit.

PREPARED STATEMENT OF DR. C.G. SHEPHERD, DIRECTOR, SOUTHERN REGIONAL AQUACULTURE CENTER

Thank you, Mr. Chairman and other Members of the Subcommittee, for the opportunity to present testimony on behalf of the Regional Aquaculture Centers. These Centers were authorized by Title XIV of the Agriculture and Food Act of 1980 and the Food Security Act of 1985 (Subtitle L, Sec.1475[d]). Their programs coordinate aquaculture research and extension activities by complementing existing research and educational programs conducted by state, federal and other agencies.

Industry representatives participate in the decision-making processes through Industry Advisory Councils, and technical expertise is provided by research and extension aquaculture scientists from institutions and agencies throughout each region. This process assures inputs from program users and provides close coordination for identification of highest priorities beneficial to producers and consumers.

U.S.-produced aquaculture products contribute approximately one billion dollars annually to the U.S. economy. However, a significant trade imbalance of several billion dollars also occurs annually for U.S. fishery products. Much additional research on aquaculture production, processing and marketing is essential if full potential of U.S. aquaculture production is to be realized. Industry representatives indicate a very favorable response to the results from the Regional Aquaculture Center programs thus far and strongly encourage additional work.

Thirteen multi-year projects funded by the Southern Regional Aquaculture Center (SRAC) have been successfully completed. Results from these projects have been published and are readily available to scientists, producers and other U.S. consumers. These projects included work on economics, nutrition, prevention of diseases, and development of improved production and harvesting technology practices. SRAC projects have developed approximately 165 extension publications and videos which are now being used nationwide.

Currently SRAC projects include research and extension work on: (1) enhancing quality assurance to make certain safe, high-quality aquaculture food products remain available to U.S. consumers; (2) developing feeding practices and rations to increase production levels; (3) developing and improving pond culture practices for optimum production and environmental compatibility; and (4) preparing extension publications in electronic formats so this information will be readily available through U.S. computer networks.

SRAC recently developed a project which will coordinate work for prevention of off-flavor in warmwater fish. This work will help insure production of high-quality aquaculture products with mild, pleasant tastes which are preferred by U.S. consumers. Thirteen scientists from nine states will work on this project to address this issue. Combined efforts to conduct work on this area are excellent examples of using regional approaches for coordinating research and extension activities across state and agency lines to maximize inputs of the best expertise available.

An additional new project will be initiated in 1996 by SRAC to optimize nutrient utilization and waste control through diet composition and feeding strategies. Significant opportunities exist to increase the profitability of aquaculture through diet improvement and refined diet formulations. Results from this effort, along with developing optimized feeding strategies, will help insure environmentally compatible aquaculture production in the U.S.

Yield verification programs to provide critical evaluations of research under actual commercial farming conditions will also be implemented by the Southern Regional Aquaculture Center during 1996. Based on results from verification trials, researchers will be able to refine or redirect research to be more responsive to commercial farm conditions.

The current authorized level of funding for the Regional Aquaculture Centers is $7.5 million annually. The FY 96 appropriation was $4.0 million divided equally among the five Centers. We would like to request your support for the full authorized level of $7.5 million for these five Centers in FY 97.

Thank you for the opportunity to submit this testimony.

PREPARED STATEMENT OF THE RURAL COALITION/COALICIÓN RURAL

The Rural *Coalition/Coalición* Rural, on behalf of its members, including American Indian OIC, Minnesota; Arkansas Land and Farm Development Corporation, Arkansas; Association for Community Based Education, Washington, DC; Boggs Rural Life Center, Inc., Georgia; Center for Sustainable Systems, Kentucky; Federation of Southern Cooperatives/Land Assistance Fund, Southeast; Intertribal Agriculture Council, Intertribal; Land Loss Prevention Project, North Carolina; Mississippi Association of Cooperatives, Mississippi; Rural Advancement Fund, Carolinas; Rural Development Leadership Network, New York; Southern Rural Development Initiative, Southeast; and our colleague, the Association of State Research Directors of the 1890 Historically Black Land Grant Colleges and Universities, National; submits the following statement as a record of our support for the following recommended levels for the programs detailed in the FY 1997 Agriculture Appropriation.

I. FY 1997 Agriculture Appropriations Recommendations

A. Programs Critical to Minority and Indian Farmers and Ranchers

1) The Outreach and Assistance Program for Socially Disadvantaged Farmers and Ranchers (7 U.S.C. 2279) - Provides grants for outreach to socially disadvantaged farmers and ranchers pursuant to section 2501 of the Food, Agriculture, Conservation, and Trade Act of 1990, to assist low income minority farmers and cooperatives to improve viability, diversify operations and build markets.

Authorized Funding Level --	$ 10.0	million
Year 95 Funding Level --	$ 2.9	million
Fiscal Year 96 Funding Level--	$ 1.0	million
Administration's FY 97 Request --	$ 3.0	million

FY 1997 Recommendation - **$10 million**

The outreach program is providing minority farmers and ranchers the long-awaited opportunity to more readily access new markets and the many USDA services and programs previously out of their reach. However, the limited funding available denies services to farmers in areas where community-based organizations which have not been funded are ready and able to serve them as soon as resources are made available. Increased services are especially needed to serve producers in the Carolinas and Virginia, where the Land Loss Prevention Project and the Rural Advancement Fund are working. Full funding is urgently needed and long overdue. We recommend full funding for FY 1997.

This outreach and training program is especially important for minority producers. The General Accounting Office last March released preliminary findings of its report on Minority under representation on County Committees. In the states of Alabama, Mississippi and North Carolina, for example, there were either one or no minority farmers represented on the old ASCS county committee, out of over 200 spots. The percentage of minority farmers in those states ranges from 15 to 30%. (see attachment 1). Since one primary function of county committee members is to inform farmers about USDA programs, this appalling lack of representation has denied these farmers an important source of information about what USDA has to offer to farmers. The Outreach program, where it is available, helps to fill this gap immediately to retain minority farmers, whose numbers have dropped precipitously and at a faster rate than other farmers. The groups working with minority farmers have, where assistance is available, made great inroads, although many deficiencies remain yet to be correcting.

With existing funds, 1890 Land Grant Colleges and Universities, Indian Tribal Colleges, and community-based organizations such as the Federation of Southern Cooperatives have helped hundreds of minority and limited-income producers develop plans to diversify and market their production, which also serves as a valuable source of income in the small rural communities where they live. (See additional background on this important program beginning on page 5.)

2) Indian Reservation Extension Program (Sec. 1677 (A), 1990 FACT Act). Provides part-time extension agents on Indian Reservations to better serve Indian farmers and ranchers.

Authorized Funding Level --	$ 8.0	million
Fiscal Year 95 Funding Level --	$ 1.75	million

FY 1997 Recommendation - $ 8.0 million

The $1.6 million in federal funds programmed in previous years for this program, combined with state and tribal contributions, has resulted in 34 extension programs providing previously unavailable services to Indian communities in 20 states. Full funding is urgently needed to expand this valuable program to more sites; current proposals from cooperating States and Tribes total $16 million for the operation of 75 Indian Extension Agent Programs.

3) Capacity Building Grants Program for 1890 Land Grant Institutions -

Authorized Funding Level --	$ 11.0	million
Fiscal Year 95 Funding Level --	$ 9.207	million
Fiscal Year 96 Funding Level--	$ 9.2	million
Administration's FY 97 Request --	$ 9.2	million

FY 1997 Recommendation -$10 million

This program is making a major difference in the quality and quantity of teaching and research programs in food and agriculture sciences on the campuses of the 1890 institutions. Since the creation of this critical program, the NASULGC have advocated a substantial and sustained increase in funding. Increased funding would allow 1890 institutions to significantly improve the range and level of academic programs offered, enhance the performance and productivity of faculty in the food and agricultural sciences and increase research opportunities for undergraduate and graduate students.

4) Appropriate Technology Transfer for Rural Areas Program (ATTRA) -This program, authorized in the 1985 Farm Bill, provides farmers, ranchers, extension agents, agribusiness and other rural users with technical assistance and information on a variety of sustainable farming practices that include both cropping and livestock operations.

Fiscal Year 96 Funding Level -	$ 1.3	million
Administration's FY 97 Request --	$ 1.3	million

FY 1997 Recommendation - $ 1.6 million

In addition to its current mission of assisting farmers, ATTRA also responds to requests for information on marketing and financing, thereby helping rural entrepreneurs expand their business opportunities in all rural communities. Requests for assistance have increased by 25% per year. Over 16,000 requests were answered in 1995; there were over 12,000 requests in the first quarter of 1996. A modest staff increase is needed to handle additional inquiries.

5) Support for and creation of Centers for Cooperative Development as authorized under Section 2347 of the Food, Agriculture, Conservation, and Trade Act of 1990. *(The ATTRA program is also funded through this account).*

Authorized Funding Level --	$ 50.0	million
Fiscal Year 96 Funding Level --	$ 1.7	million

FY 1997 Recommendation - $ 5 million

Existing cooperative centers supported by this program have established a network of rural cooperative development training centers including some in rural persistently poor counties. The network has demonstrated the unique ability of cooperatives and credit unions to help low income people develop community owned businesses. Continued support for this section and priority on the National Rural Cooperative Centers Network (funded through Cooperative Development Foundation and working in poor communities) will produce important benefits for rural America. In particular, the small demonstration grants to centers like the Federation of Southern Cooperatives Rural Training Center in Epes, Alabama, which holds dozens of workshops each year for limited resources producers in cooperative and credit union development, farm diversification, housing and marketing, should be increased. More substantial support and funding would provide the education and training needed to reactivate the nation's poor and rural communities. Similar centers are operated by Arkansas Land and Farm Development Corporation, Boggs Rural Life Center (Georgia, Franklinton Center (North Carolina) and Penn Center (South Carolina).

B. Agriculture Credit Programs

Adequate agricultural credit is an essential resources for small and moderately sized family farmers, and is especially crucial to minority and Indian producers, all of who have experienced great difficulty in securing guaranteed loans from financial institutions. We urge the subcommittee to:

1) Earmark $ 8 million of the total budget of the Farm Loan Programs specifically for the Indian Land Acquisition Program as authorized under Section

1854 of the 1990 FACT Act. Indian reservations face jurisdictional and managerial crises resulting from fractionated land-heirship and checker-boarded land-ownership patterns. The funding level for this critically needed loan program has been so low that tribal applicants have been repeatedly turned away, despite the urgent need to resolve long-standing ownership problems. Full funding for the Indian Land Acquisition program would provide more tribes with the ability to purchase allotted land in their jurisdictional area and to consolidate ownership and management functions for more effective use of agricultural resources.

2) Provide funding for Consolidated Farm Services Agencies direct operating loans to no less than $800 million and direct farm ownership loans to at least $100 million. The movement from direct lending to guaranteed lending, and guaranteed lending with interest assistance has effectively and significantly reduced the available credit for limited resource, minority and beginning farmers who have few other alternative sources. We strongly oppose this redirection of funds and urge that these programs assume their original and important mission with the agency serving as the lender of last resort for limited resource borrowers.

C. Sustainable Agriculture

Additional research and implementation of sustainable farming methods, and identification and removal of effective barriers to sustainable practices within farm programs are vital steps to conserve energy, to protect natural resources , and to reduce costs. Specifically, we urge the subcommittee to

1) Provide full funding of the Sustainable Agriculture Research and Education (SARE) at $8.1 million. The SARE program provides a unique partnership among farmers, research institutions, non-profit organizations and educational institutions on sustainable farming methods and practices.

2) Provide adequate funding for the National Organic Standards Board to accomplish its goals relating to Organic Certification, and to allow full public hearings and meetings on this important issue.

II. Background on the Outreach and Technical Assistance Program for Socially Disadvantaged Farmers, Section 2501, 1990 FACT Act

The Outreach and Technical Assistance Program for Socially Disadvantaged Farmers, has allowed the USDA to reach producers not previously well-served by USDA programs. The program expands upon the Small and Disadvantaged Farmer Initiative established administratively within USDA by the Reagan and Bush administrations in response to a 1982 report by the Civil Rights Commission, detailing the precipitous decline in black-owned farms and the relationship of this decline to USDA service delivery.

1) The Outreach and Assistance Program for Socially Disadvantaged Farmers and Ranchers as authorized in Section 2501 (a) of the 1990 FACT Act provides grants for outreach to socially disadvantaged farmers and ranchers pursuant to section 2501 of the Food, Agriculture, Conservation, and Trade Act of 1990, which supports outreach and assistance to low income minority farmers and cooperatives to diversify operations and build markets. Over 30 educational institutions and community-based organizations have assisted thousands of farmers in activities ranging from market and cooperative development, farm diversification, to initiating community garden projects to improve the health and skills of several hundred American Indian and other low-income youth. (7 U.S.C. 2279)

The program directs resources to the community-based organizations and educational institutions with the demonstrated experience and ability to reach and assist these farmers and ranchers. Under this program, the 1890 Institutions and tribal community colleges, and community groups have immediately provided cost effective and expert assistance to involve people of color in agriculture. The outreach program is providing these farmers and ranchers the long-awaited opportunity to more readily access new markets and the many USDA services and programs previously out of their reach. However, the limited funding available denies services to farmers in areas where community-based organizations, which have not been funded, are ready and able to serve them as soon as resources are made available.

With existing funds, 1890 Institutions, Indian Tribal Colleges, and community-based organizations such as the Federation of Southern Cooperatives have helped hundreds of minority and limited-income producers develop plans to diversify and market their production, which also serves as a valuable source of income in the small rural communities where they live.

Program Goals: The Outreach and Technical Assistance Program is designed to meet the following objectives by assisting small farmers:

- to expand their economic capabilities through education and technical assistance.
- to own and operate successful farm-related businesses.
- to access effectively agriculture programs, services and resources.
- to become part of the economic and sustainable development forces that shape their communities.

Outcomes and Accomplishments: The Outreach and Technical Assistance program:

- Supports projects located in 28 educational institutions and community based organizations in over two dozen states. These include the 1890 Land Grant Institutions, Hispanic and Indian Tribal Colleges and community-based groups with long experiences serving small producers.

- Provides services in an aggregate of 394 counties, including some of the poorest in the country and where most minority and undeserved farmers are concentrated.

- In conjunction with loan programs, the outreach program serves 1818 borrowers. Of these, the vast majority are current in payments. Services provided included debt restructuring and lo an servicing and packaging.

- Another 6145 non-borrowers have been served directly through technical assistance, farm diversification and small business planning.

- The total number of producers served through direct assistance, and educational activities, including trainings in cooperative and credit union development is 52,563.

The program has been underfunded throughout its entire history. With additional funds, cooperating institutions could do much more to provide additional services and reach large numbers of undeserved producers in similar areas where resources have not yet been allocated.

Results:

Participating farmers and cooperatives have developed alternative agriculture enterprises including vegetable production and marketing, developed additional markets for new product, provided opportunities for small farmers to build successful businesses and increase farm and other alternate business opportunities. Participating farmers have improved and sustained their farming operations, upgraded management skills, increased farm profitability and implemented sustainable and integrated farming systems that also benefit the small communities in which they reside.

Examples:

As a result of this program,

- Collaboration between 1890 land grant universities and community based organizations led to new levels of economic cooperation and development. The Mississippi Federation of Cooperatives, in cooperation with Alcorn State University, has developed a direct marketing and added value packaging operation including the completion of a half million dollar processing shed in Hattiesburg, MS to do added value processing. The facility will serve and subsidize the income of 75 farmers, employ a dozen people, and create new markets. Other projects under development include a cotton gin for small farmers, a processing facility for hot sauce, a special livestock cooperative and the expansion of a direct marketing program which sells vegetables to inner cities consumers in New Orleans, Chicago, Philadelphia and Memphis.

- In Georgia and South Carolina, universities and community based groups collaborate to provide loan serving, debt restructuring , cooperative development, and the development of added value and alternative markets in vegetables, pecan processing, cut flowers, and direct inner city marketing in Atlanta. A regional market in Memphis is being developed to serve the Southeast region. The Federation of Southern Cooperatives/Land Assistance Fund alone provides over 500 meetings and trainings annually for small farmers on cooperative and and credit unions development, alternate markets, and soil conservation.

- The program also serves American Indian producers. In Minnesota, Project Grow is operated by the American Indian Opportunities Industrial Center. Organized in 1990, Project Grow assists American Indian Tribes, schools and community organizations to develop self-sustaining agriculture, health and nutrition, and diabetes education and prevention programs appropriate to local needs. Project Grow now includes "Grow Labs" and community, school and elder garden projects, with 1250 family gardens, 12 community and 10 school gardens. Almost 100 "Grow Labs" which focus on diabetes and wellness education, and which raise seeds for planting, have been installed in elementary schools and in 9 urban Indian schools and organizations in inner city Minneapolis.

The Outreach and Technical Assistance program is the most effective tool developed to carry out the mission of USDA as the technical provider for small farmers. For a very small investment, the program has significant multiplier effects in the small and poor communities where there exist few other possibilities for sustainable economic development. It also serves to offer a small token of relief for the many deficiencies in the service provided to these farmers by the Department.

- Rural Development Leadership Network

The Rural Development Leadership Network provides education to minority small farmers that develops their skills and credentials and leads to successful projects such as the following: Field operations in Georgia assisting in financial planning, diversification of crops, and marketing; organic farming on an Indian reservation in South Dakota providing food to local programs;

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY

PREPARED STATEMENT OF FRANCIS L. LAWRENCE, PRESIDENT

Summary

Rutgers University seeks matching funds in the Fiscal Year 1997 USDA budget to complete construction of a Plant Science and Biotechnology Complex. The purpose of this facility is to support agriculture; the building is used for teaching, research, and public service activities that benefit agriculture in New Jersey and in the United States.

The state and the university have appropriated more than $27 million to support both phases of construction of the Plant Science and Biotechnology Complex. In addition, the university has committed another $10 million in ancillary facilities, such as greenhouses and containment facilities for transgenic plants. During the last nine years, this Committee has appropriated approximately $16.47 million for planning, program design, and construction of the facility, $10 million of which was used in Phase 1. Phase 1 of the complex is complete.

Phase 2 of the project involves construction of a wing off of the existing structure, and also calls for a $10 million federal investment, of which approximately $6.47 million has been appropriated by Congress since FY 94. The amount actually received by the university is about $6.28 million, as USDA captures a modest 3 percent administrative allowance. For Fiscal Year 1997, we request $3.833 million as the final federal match to complete construction of the Phase 2 wing of the complex, and complete the $20 million federal share of the entire project.

Mr. Chairman:

I am Laura Meagher, associate dean of research at Rutgers Cook College, and associate director of the New Jersey Agricultural Experiment Station. I am appearing today on behalf of Francis Lawrence, president of Rutgers, the State University of New Jersey, to speak in support of the United States Department of Agriculture's program that provides matching funds for constructing agricultural facilities at American universities. This program continues a proud federal tradition of participating appropriately in a federal-state-industry-university partnership to support our agricultural economy, a tradition that has contributed continuously since President Abraham Lincoln signed the Morrill Land Grant Act of 1862. It is this partnership that has sustained America's international leadership in agricultural research and production.

Rutgers University now seeks matching funds to complete construction of a Plant Science and Biotechnology Complex under this program. **The purpose of this facility is to support agriculture**; the building is used for teaching, research, and public service activities that benefit agriculture in New Jersey and in the United States. During the last nine years, this Committee has appropriated approximately $16.5 million for planning, program design, and construction of the facility. Mr. Chairman, we are extremely grateful for this Committee's strong vote of confidence in supporting the complex thus far.

The state and the university have appropriated more than $27 million to support the Plant Science and Biotechnology Complex. In addition, the university has committed another $10 million in ancillary facilities, such as greenhouses and containment facilities for transgenic plants.

Phase 1 of the complex is complete. Last October the building was dedicated and named for the late New Jersey legislator, Walter E. Foran, an early, progressive, and staunch advocate of agricultural biotechnology. Foran Hall contains state-of-the-art research laboratories; conference and classroom facilities; an outstanding science library, and attached greenhouses. It is home to our departments of Plant Science and Plant Pathology, our Center for Agricultural Molecular Biology (AgBiotech Center), and our Center for Turfgrass Science.

Foran Hall has already influenced the status and the quality of plant science, agricultural biotechnology, and student life on the Cook College and Douglass College campuses at Rutgers New Brunswick. For example, the facility is located adjacent to a residential building for Douglass College women who are part of the intensive math/science-oriented program there, and so serves an important role in Rutgers' overall effort to increase the representation of women in the natural sciences.

It is difficult to overstate the catalytic affect the facility has had on the centers and departments housed there. For example:

- The AgBiotech Center has quickened its pace of research disclosure and patent applications. Nine disclosures and six patent applications were filed on discoveries ranging from disease resistance in plants and antiviral plant proteins, to phytoremediation technologies: using plants to clean up deadly radiotactive materials and heavy metals from soils and water. For New Jersey agriculture, phytoremediation offers potential for new, high-demand, high-value crops, and potential for cleansing contaminated soils so that they can be used for production agriculture.

- External, competitive funding--generated by only seven AgBiotech research teams--increased in FY 1996 to more than $2.5 million from federal, industry and foundation sources.

- Negotiations currently under way will commercialize breakthroughs in turfgrass biotechnology, nutriceuticals, and phytoremediation.

- Undergraduate students flock to take advantage of the biotechnology curriculum and research opportunities in faculty laboratories and crowd the computer terminals in the Chang Science Library late into the night.

- AgBiotech and Cook College will host the national Agricultural Biotechnology Council conference on Novel Products and new Partnerships in June of this year.

Phase 2 of the project involves construction of a wing off of the existing structure, and also calls for a $10 million federal investment, of which approximately $6.47 million has been appropriated by Congress since FY 94. The amount actually received by the university is about $6.28 million, as USDA captures a modest 3 percent administrative allowance. For Fiscal Year 1997, we request $3.833 million as the final federal match to complete construction of the Phase 2 wing of the complex, and complete the $20 million federal share of the entire project.

Completion of the Phase 2 wing will allow for total consolidation of the Plant Science and Plant Pathology departments and will provide additional, much-needed instructional facilities, including a computer lab that will double as a distance learning facility, thus serving an important regional need. We are hopeful that the Phase 2 wing also will house two new endowed chairs, one each in new-use agriculture and natural products chemistry.

New Jersey's farmers face formidable challenges today. The state is densely populated, so competition for natural and human resources is fierce, and farms often operate in close proximity to suburban neighborhoods. The costs of farming are high, with high land values translating into New Jersey farmers shouldering the heaviest tax burden of any state agricultural community in the nation, and a cost of living among the highest in the nation. Add to this the growing public concern over the environmental effects of intensive agriculture, and you have, as it were, a tough row to hoe.

Although population pressure and high costs present challenges to many agriculturists around the nation, New Jersey, as the most urban state, has experienced them sooner and more intensely. Our state is in many ways a microcosm of contemorary global issues and challenges, and our ability to address these effectively as they relate to agriculture is extraordinarily important within and beyond the Garden State. Our responses include exploring new-use and value-added agriculture, natural-products chemistry, technology development and transfer to commercial partners, and developing new global markets. The work ongoing and planned for Foran Hall relates directly to each of these priorities.

New Jersey has begun to recover from a very bleak period for our production agriculture sector, which now contributes about $813 million to the state's economy each year. We must sustain the upward trend, for agriculture's contribution to quality of life in New Jersey extends far beyond its sizeable economic impact; for example, it helps preserve the open spaces that New Jerseyans prize. I am certain that this Committee understands the value of maintaining the diversity of the nation's agricultural production and the importance of having healthy agricultural programs in each state.

Thank you for your consideration. We are grateful to this Committee for its pivotal support in bringing our Plant Science and Biotechnology Complex to fruition. The complex underpins our philosophy that we must integrate developing technologies with traditional approaches to ensure that modern American agriculture is as productive and competitive as it needs to be in the global economy.

PREPARED STATEMENT OF TIMOTHY M. CASEY, ACTING EXECUTIVE DEAN OF AGRICULTURE AND NATURAL RESOURCES

Summary

The Rutgers Blueberry/Cranberry Research and Extension Center at Chatsworth, New Jersey was created in 1984 as a state initiative. As of about 1990, however, the scope and benefits of the station's work began to extend beyond New Jersey, and the facility now is recognized as one of the finest research centers serving the national blueberry and cranberry industries.

We seek support for inclusion of $220,000 in the FY97 USDA budget for the Rutgers Blueberry and Cranberry Research and Extension Station at Chatsworth to match the $250,000 annual appropriation from the New Jersey legislature and the annual budgetary support from the NJAES.

The Rutgers Blueberry/Cranberry Research and Extension Center at Chatsworth, New Jersey was created in 1984 as a state initiative. Blueberries and cranberries are important crops for New Jersey (we rank first in the nation in fresh market blueberry production and third in cranberries), and the value of the Chatsworth Center to the state blueberry and cranberry industries has been and remains very high. As of about 1990, however, the scope and benefits of the station's work began to extend beyond New Jersey.

The Rutgers Blueberry/Cranberry Research Station now ranks among the finest national research centers serving the national blueberry and cranberry industries. Indeed, when federal funding for Chatsworth was seriously threatened in FY96, growers from Oregon, Michigan, Louisiana, Massachusetts, and California -- and cooperative associations representing growers and distributors throughout the U.S. and Canada -- called and faxed their legislators with messages of support Rutgers research and extension station. Today the national blueberry crop is worth more than $135 million each year, and injects more than $300 million into the national economy. The annual cranberry crop is worth some $200 million and is estimated to contribute about $500 million to the U.S. economy.

We seek support for inclusion of $220,000 in the FY97 USDA budget for the Rutgers Blueberry and Cranberry Research and Extension Station at Chatsworth to match the $250,000 annual appropriation from the New Jersey legislature and the annual budgetary support from the NJAES.

A major goal of the research conducted at the center is development of technology to reduce pesticide use in the culture of these two crops and to reduce the impact of their production on the environment. This is especially important in accommodating continued agricultural production near environmentally sensitive areas (wetlands, Pinelands) where these crops must be grown. Another important and extremely promising area of research is in the medicinal properties of cranberries and blueberries.

If federal funding for the station is removed, research on development of berry varieties resistant to diseases and pests that account for the vast majority of fungicide and insecticides use would be terminated. Development of integrated pest management techniques for these crops also would end, as would research and development of biocontrol measures that would enhance the nationwide Integrated Pest Management effort.

Throughout its lifetime, the Rutgers Blueberry/Cranberry Research Station has been very productive. Besides developing many new varieties of blueberries and cranberries for the industry, this national research and extension center both generates and disseminates the results growers need to produce consistently reliable yields of high-quality berries. The project objectives are twofold: first, to develop pest management methods and disease-resistant varieties which will reduce losses to cranberry and blueberry crops from disease, insects, and climatic factors while minimizing the use of pesticides. This is particularly important in accommodating continued agricultural production near environmentally sensitive areas such as wetlands and the Pinelands where these crops must be grown. The second objective is to improve fruit quality and productivity through genetic enhancement of these crop species.

Among the Center's specific achievements:

- Researchers have succeeded in isolating the specific compound in cranberries that can prevent and cure urinary tract infections. Intellectual property issues are being resolved before a formal announcement of this achievement is made.

- In cooperation with USDA/Agricultural Research Service (ARS), the Center has released 6 blueberry varieties since 1988 all of which are adapted for growing in New Jersey, Massachusetts, New York, Michigan, Arkansas, North Carolina, Oregon and Washington.

- Work at the Center has resulted in increased genetic diversity in the blueberry and cranberry gene pool for both breeding and in breeding lines; and identification and evaluation of elite breeding lines for future release.

- Center scientists have successfully identified and characterized the causal agent and insect vector for a very destructive blueberry disease, Blueberry Scorch Virus; have identified major causal agents inciting cranberry fruit rot in New Jersey; and have identified potentially useful biological control organisms against cranberry fruit rot.

- Research has led to identification of a new destructive pest -- mealybug -- in blueberry, and identification of potentially useful biological control organisms against cranberry and blueberry insect pests.

The Blueberry/Cranberry Research and Extension Center has an excellent record of productivity and achievement. Still, much remains to be done, particularly in the area of improving cranberry varieties. Successful cultivation of both of these wetland crops depends upon pesticides to control a variety of major pests and diseases. IPM research is needed to reduce our reliance on these chemicals, as is the breeding of resistant varieties.

Let me emphasize that the small family farms/businesses that grow and manage both of these crops are doing what they can to support themselves. Modest federal funding for blueberry and cranberry research in no way qualifies as an undue federal subsidy for farmers or agribusiness.

Thank you for the opportunity to testify on behalf of federal funding for the Rutgers Blueberry and Cranberry Research and Extension Center in Chatsworth, NJ. Please do not hesitate to contact me if I can provide further information or address any concerns you may have.

Testimony on Wildlife Damage Control in New Jersey

Summary:

Wildlife, notably white tail deer and birds such as seagulls and non-migratory Canada geese, are responsible for considerable economic damage and public health risk throughout the Northeast -- particularly in New Jersey. Rutgers University and the New Jersey Agricultural Experiment Station are pursuing solutions to wildlife damage as aggressively as possible within budget constraints. Rutgers has established the Wildlife Damage Control Center at the University's Clifford E. and Melda C. Snyder Farm for Sustainable Agriculture. The University and the State of New Jersey support the center, which is engaged in research aimed at reducing deer production. Though successful, the current research, demonstration and practical outreach effort will not adequately address the existing and future challenges we face. New Jersey needs -- and Rutgers has the capacity to undertake -- a sustained, intensive research and outreach effort in wildlife damage control.

Rutgers invited USDA/APHIS operations staff to co-locate at this center, and now provides in-kind support for this co-location arrangement. However, the need for programmatic support is at least as great as the need for operational support.

We request authorization and appropriation of $300,000 to be added to the USDA Animal Damage Control research budget to fund research, demonstrations, and outreach efforts relative to extensive damage caused by deer, non-migratory Canada geese and other wildlife in New Jersey. The $300,000 in USDA funding we seek would support the goals of the USDA/APHIS Wildlife Damage Control Center. In addition, we seek to expand the scope of the animal damage control research mandate of USDA's Animal and Plant Health Inspection Service (APHIS) specifically to include deer and non-migratory bird damage in New Jersey.

Wildlife, notably white tail deer and birds such as seagulls and non-migratory Canada geese, are responsible for considerable economic damage throughout the Northeast -- particularly in New Jersey. New Jersey farmers lose $20 - $30 million a year in crop damage by deer and other wildlife. These costs, borne on top of other high costs of doing business in an urban state, decrease the competitiveness of New Jersey agriculture. Property owners suffer significant financial losses from damage to ornamental and landscape plants. Nursery operators sustain significant economic losses as property owners refrain from purchasing ornamentals because of frustration over deer damage.

Public lands such as parks are adversely affected, particularly from deer damage and the fouling of ponds and lakes by overpopulation of geese. Moreover, wildlife represent significant safety hazards to humans. Birds pose a risk to aircraft and passengers at major airports and carry such zoonotic diseases as e-coli, brucellosis and salmonella. Deer are host to the ticks that transmit Lyme Disease, and are involved in an estimated 8,000 to 10,000 automobile collisions a year (at a cost of about $4,000 per incident).

These problems are manifest in every county of the state -- and indeed throughout the Northeast and, increasingly, some areas of the Southeastern U.S. At the December 1995 annual conference of the New Jersey Farm Bureau, each of the state's 21 counties submitted a resolution calling for relief from wildlife damage, and at the January 1996 State Agricultural Convention a statewide resolution was adopted. By and large, these resolutions advocate changing hunting laws to increase the number of animals taken during the hunting season. Changing these laws, however, is very difficult in a state as densely populated as New Jersey.

Rutgers University and the New Jersey Agricultural Experiment Station are pursuing solutions to wildlife damage as aggressively as possible within budget constraints. Rutgers has established the Wildlife Damage Control Center at the University's Clifford E. and Melda C. Snyder Farm for Sustainable Agriculture. The University and the State of New Jersey support the center, which is engaged in research aimed at regulating deer production. Relevant research continues, including: fertility studies in deer and birds; chemical attractant and deterrent development for deer; testing the efficacy of various types of deer fencing; influence of communal roosts on dispersion of avian agricultural pests; role of salt marsh wading birds in the Eastern Equine Encephalitis cycle; and studies of bird-airport associations directed at mitigation of bird strike hazards. Some research support comes from the American Farm Bureau Research Foundation.

Rutgers invited USDA/APHIS operations staff to co-locate at this center, and now provides in-kind support for this co-location arrangement. By virtue of this arrangement, we have an excellent working relationship with the USDA's Animal Damage Control operations staff. However, the need for programmatic support, which flows through the research budget, is at least as great as the need for operational support.

Though successful, the current research and outreach effort alone will not adequately address the existing and future challenges we face. New Jersey needs -- and Rutgers has the capacity to undertake -- a sustained, intensive research, demonstration, and outreach effort in wildlife damage control.

We request authorization and appropriation of $300,000 to be added to the USDA Animal Damage Control research budget to fund research and outreach efforts relative to extensive damage caused by deer, non-migratory Canada geese and other wildlife in New

Jersey. [Given the high priority research needs already being addressed at the Denver Wildlife Research Center, to which these research funds flow, we do not believe it feasible or advisable to reallocate funds within that center's budget.]

In addition, we seek to expand the scope of the animal damage control research mandate of USDA's Animal and Plant Health Inspection Service (APHIS) specifically to include deer and non-migratory bird damage in New Jersey. [At present, the mandate is "to continue work related to beaver control in East Texas, the mountain lion threat to wool growers in California, rabies epizootic control in South Texas, and blackbird damage control." (H.R. 1976, Item 58 (125) Committee Provisions)]

The $300,000 in USDA funding we seek would support the goals of the USDA/APHIS Wildlife Damage Control Center, which include: identifying research needs in wildlife damage control alternatives and providing leadership in assembling the appropriate research talent--ranging from single investigators to multidisciplinary teams--needed to address the most pressing problems; identifying opportunities and coordinating efforts in securing funding for research in wildlife damage control; coordinating the development and maintenance of teaching programs for undergraduate and graduate students designed to provide training in principles and practices of wildlife damage control; and providing appropriate outreach programs in wildlife damage control for working professionals, the agricultural community, and the lay public.

Because of its dense populations of both people and wildlife, especially deer, New Jersey is uniquely challenged to address these wildlife management issues. We confront today the problems that many other states will confront tomorrow. Nowhere in the U.S. is there greater need for effective animal damage control -- or better qualified scientists to address that need -- than in New Jersey.

PREPARED STATEMENT OF RICHARD T. GUEST, PH.D., OFFICE OF IR–4, COOK COLLEGE/NEW JERSEY AGRICULTURAL EXPERIMENT STATION

Mr. Chairman and members of the subcommittee, thank you for the opportunity to speak on behalf of the IR-4 minor use program. I would like to discuss the reason this program was organized 33 years ago, why it exists today and how it has benefited farmers and nurserymen. My name is Richard Guest. I have been associated with IR-4 for 23 years and serve as National Director.

BACKGROUND

A "minor use" is generally agreed to be any use of a pest control product for which the sales value is insufficient to justify the cost by a commercial registrant to obtain a registration. This may be a frequent use of a product on a low volume crop or the infrequent or localized use of a product on a high volume crop. In either case, the problem of obtaining a registration for the minor crop/minor use market is primarily one of economics. As research and development costs for meeting regulatory requirements increase, pesticide registrants concentrated their registration efforts in areas where financial returns justify these expenses. These are the large acreage crops such as corn (79.3 million acres), cotton (13.3 million acres), soybeans (59.3 million acres) and wheat (72.3 million acres). As a consequence, producers of vegetables, fruits, nuts and specialty crops including hops, mint, nursery and floral plants have, at best, only a limited number of pest control products available.

Taken as a whole, however, so called "minor crops" really are not minor at all. According to the most recent census of agriculture, a total of 11 million acres of minor crops are grown in the U.S. with a combined value of $32 billion, or 42% of all U.S. crop sales. Indeed, the value of these crops in 27 states exceed 50% of the value of all crops grown in those states. For many states such as California, Florida, Georgia, Hawaii, New Jersey, New York, North Carolina, Pennsylvania and Washington, minor crops make up a very significant portion of all crop sales.

ORGANIZATION

The IR-4 Project was organized in 1963 by directors of State Agricultural Experiment Stations (SAES) in cooperation with the U.S. Department of Agriculture - Cooperative State Research Service (now

Cooperative State Research, Education and Extension Service) to respond to the need to provide growers of minor crops with pesticides that chemical companies were unwilling to obtain. This program currently has four regional analytical laboratories (Michigan State University, University of California-Davis, University of Florida and Cornell University), eleven SAES satellite laboratories, three ARS analytical laboratories, 18 field research centers and numerous state and federal researchers all participating in a cooperative research effort.

Overall coordination of both the state and federal programs is provided by a national headquarters staff located at the New Jersey Agricultural Experiment Station. Administrative oversight is provided by SAES directors and USDA administrators and technical direction by SAES and USDA scientists. Program guidance is provided by an IR-4 Commodity Liaison Committee (CLC) which insures that IR-4 is operating effectively and is serving the real needs of minor crop producers.

OPERATION

FOOD USE PROGRAM

The IR-4 Project is a "grass roots" program with clearance requests originated by growers and research and extension personnel, forwarded through IR-4 state and federal liaison representatives to regional coordinators and ultimately to scientists at IR-4 headquarters. Each request is reviewed to determine whether alternatives exist and whether a commercial registrant will add the use to the label if a tolerance or exemption is granted based on an IR-4 petition. An EPA review determines if major data gaps exist that are beyond the scope of IR-4 research. Requests that have successfully passed this screening are prioritized by regional liaison committees, national committees of state and federal agricultural scientists and by growers and commodity representatives. The final selection of projects for research is made by IR-4 field and laboratory coordinators based on review panel recommendations and the availability of funding. Highest priority is given to crops lacking effective pest control and to environmentally compatible alternatives.

Field studies based on IR-4 research protocols are conducted mainly at IR-4 supported field research centers which are strategically located commensurate with EPA guidelines and administered by state or federal research scientists. Analyses of residue samples are carried out at IR-4 analytical laboratories. All research is performed according to EPA Good Laboratory Practice (GLP) regulations utilizing IR-4 Quality Assurance personnel.

Data from IR-4 trials are incorporated into petitions and submitted to EPA with the request that a tolerance or exemption be established for a specific product on a specific crop. Following publication in the Federal Register, the product is labelled by a commercial registrant and is then legally available for use by farmers and nurserymen. The process of clearing a pesticide product for use on a minor crop generally requires three to five years depending on the difficulty of the study and EPA review time.

ORNAMENTALS PROGRAM

The IR-4 Project was expanded in 1977 to assist in registering pesticides on commercially grown ornamentals, including floral and foliage plants, woody nursery stock, Christmas trees, turf and forest uses. The annual wholesale value of ornamentals in the U.S. is in excess of $11 billion.

The operation of the IR-4 Ornamentals Program is similar to the food use program. Priorities are based on the availability of alternatives, importance of pest problems and potential value in IPM systems. Since no residue data are required and no tolerances are involved, registration of pest control products for ornamental commodities is less complex, less time consuming and less expensive than food use clearances. Data developed from the IR-4 research program are forwarded to registrants to support new label claims for ornamental crops.

BIOPESTICIDE PROGRAM

In 1982, the scope of IR-4 was expanded to include research leading to the registration of biopesticides including microbials, biochemicals and, more recently, transgenics. IR-4 is committed to developing pest control alternatives on minor food crops and ornamentals and works cooperatively with public and private sector individuals and organizations to achieve this objective. IR-4 interacts with USDA, EPA, FDA and product registrants to determine data requirements for the registration of proposed uses. The program has the resources to coordinate and fund field and laboratory research, assist in the development of Tier I toxicology data and prepare data packages for submission to EPA.

IR-4 has earmarked a portion of all monies above base 1993 funding to support biopesticide research. The program seeks to leverage these resources with matching funds from other organizations with similar interests in biological control. Proposals to IR-4 requesting funding must show that the project is in the public interest, that there is potential for commercial development and that a minor crop or use is involved.

STRATEGIC PLAN

The 1988 amendments to FIFRA mandated all pesticides registered prior to November 1984 be reregistered by December 1997. To address serious concerns from the producer community over the possible loss of products labelled for minor crops, IR-4, with the assistance of state agricultural experiment stations, initiated surveys in 1989 to assess the magnitude of the minor use reregistration problem. The results of the survey indicated that as many as 1000 minor use labels of importance to producers could be lost through the reregistration process because of lack of registrant support.

In order to respond to grower needs, IR-4 developed a strategic plan in 1989 to incorporate these reregistration objectives into its ongoing program. This strategic plan established the following goals:

- Reregister up to 1000 needed minor uses not supported by industry.
- Increase the programs research capacity to handle both minor use registrations and reregistrations.
- Expand the existing research program for the registration of biological pest control products.
- Intensify research on the registration of pest control products for ornamental crops.
- Seek increased program funding to support this minor use initiative.

The IR-4 strategic plan was reviewed by both USDA and the General Accounting Office and found to be sound. Adequate funding was identified as a serious constraint to a fully effective program. Based on these reviews and with assistance from commodity producers, Special Research Grant funding to IR-4 increased four fold from $1.7M in 1989 to $6.9M in 1994. These monies, together with private sector direct and in-kind support, enabled IR-4 to:

- Increase the number of food use clearances by 75% compared to the previous 7 years.
- Initiate more than 600 priority minor use reregistration projects, 500 of which have been completed and the remainder will be completed by the 1997 deadline.
- Increase research on biopesticides from 2 studies in 1989 to 9 studies in 1995.
- Provide data to support exemptions for 18 biopesticides.
- Develop a model public sector IR-4 Good Laboratory Practice program.

IR-4 updated its strategic plan in 1995 by identifying goals for the next seven years. The current *Minor Crop Pest Control Strategy: 1995-2002* provides for a shift in program emphasis, following completion of the reregistration initiative, to increase the number of registrations for biological pest control agents and reduced risk pest control products important to IPM programs on minor food and ornamental crops. It is the goal of this program to complete priority minor use reregistrations by the December 1997 deadline and to increase funding for biopesticide research in order to register 50 biologicals and reduced risk pest control products on minor crops by 2002.

STRATEGIC PLAN COSTS

Many sources of funding contribute to the support of the IR-4 minor use program. These include direct funding from USDA, commodity producers and commercial registrants and nonmonetary support from state and federal research institutions. In FY 96, $8.3M in federal funds supported the operation of IR-4, including $5.7M from CSREES in the form of the Special Research Grant program, $2.1 in Agricultural Research Service funding and $0.5M in Hatch funds. Direct support from the private sector typically adds about $0.5M annually. Funding to IR-4 is highly leveraged by host institutions from a variety of sources including technical and administrative assistance, laboratories and other facilities, equipment and land. It is estimated that for each federal dollar directed in support of IR-4, three dollars are contributed by host research institutions.

Although no overhead is charged against these grant funds, available monies are eroded by federal regulations and inflation. A survey in 1993 and again in 1995 among IR-4 cooperators showed that compliance with EPA mandated Good Laboratory Practice Standards consumed 40% and 36% respectively of IR-4 research dollars. Beginning in 1995, EPA-mandated geographic data requirements increased the cost of field trials by 60%. Inflation alone at 5% per annum will increase the cost of the program by more than $4 million by 2002. Further, it is typically far more expensive to develop data to support minor use biopesticide registrations than conventional minor use pesticide registrations. Emphasis on biologicals will more than triple the cost of IR-4 research by 2002.

USDA-CSREES has requested an increase of $5 million in its Special Research Grant program for IR-4 in FY97. If these funds are appropriated by Congress and combined with other public funds, total dollars available to the minor use program in 1997 would be $13.3 million which approaches the $14 million estimated in the strategic plan for achieving long range goals. This plan projects that a budget of $33M will be needed to fully implement the IR-4 strategic plan by the year 2002.

IMPACT

I would like to relate four examples which illustrate the value of the IR-4 minor use program. There are many similar examples involving crops such as artichokes, cherries, Belgium endive, mint, asparagus, cranberries and snap beans.

Tomatoes and Peppers. IR-4 assisted in securing a tolerance and registration for imidacloprid on tomatoes and peppers. This insecticide is particularly effective in controlling the silverleaf whitefly, which received media attention several years ago as a very destructive pest of a large variety of vegetable and ornamental crops. Tomato and pepper growers in the southern and western states previously needed to make as many as 20 insecticide applications to curtail the whitefly. Now only a single application of imidacloprid is now required to achieve the same degree of control. Other favorable characteristics, including low mammalian toxicity, safety to beneficial insects and compatibility with Integrated Pest Management (IPM) programs, make imidacloprid the product of choice for tomato and pepper growers.

However, there was a serious drawback to grower acceptance of imidacloprid. EPA placed a rotational restriction on its use, meaning that tomato or pepper fields treated with imidacloprid could not be planted to favored rotation crops within 12 months. At the request of growers, IR-4 successfully petitioned EPA to establish a rotational tolerance for imidacloprid which allows growers to plant cucumbers, squash and melons on land treated with imidacloprid shortly after their other crops have been harvested. As a result, U.S. tomato and pepper growers are now able to take full advantage of the economic and environmental benefits of imidacloprid in their production practices. In the words of Charles Matthews of the Florida Fruit and Vegetable Association, "Access to imidacloprid has numerous benefits including reduced pesticide use, reduced risk to workers, reduced risk to beneficials and reduced risk to the environment. This is an excellent example of what growers, IR-4, university scientists and EPA can accomplish when we work together toward a common goal."

Hops. Hops are a minor crop in the United States with 41,000 acres grown in Washington, Oregon and Idaho. However, with 28% of world production valued at $137 million, the U.S. is the largest world producer of hops. In the late 1980's, the consistent supply of high quality hops was in jeopardy because of the lack of effective, registered pest control products. Yet pesticide manufacturers were not pursuing the hop market because of the lack of economic incentive. As a result, foreign buyers were cautious about purchasing from an inconsistent U.S. market and, with 63% of all U.S. hops production exported, growers were facing serious consequences.

IR-4 worked closely with the Hops Research Council to identify and develop registration data for effective alternatives. In this instance, IR-4 developed research protocols, the hops industry funded the field and analytical research and IR-4 prepared the petitions for submission to EPA. Successful completion of this coordinated effort resulted in a stable and dependable supply of quality U.S. hops. According to Ann George, Administrator of the Washington Hop Commission and chair of the United States Hop Industry Plant Protection Committee, "IR-4 support of pesticide clearances on hops has saved our industry from extinction".

As a sequel, IR-4 also aided the U.S. hop industry by sharing research data with the German government which will shortly result in a German import tolerance for the insecticide bifenthrin on U.S. hops. This has lead the way for U.S. hops to be exported more freely to the lucrative European Union market. Hopefully, this effort toward international harmonization will open even more markets for U.S. hops worldwide.

Onions. Dry onions are grown in nearly every state with more than 2/3 of the total crop produced in California, Colorado, New York, Oregon and Texas. Season-long weed control is essential for a profitable crop and to facilitate harvesting. By the late 1980's, 4 of the 5 registered onion herbicides had been withdrawn from the market because of management decisions regarding these compounds. The remaining product was expensive and marginally effective and hand weeding was impractical because of cost and availability of labor.

IR-4 had successfully petitioned EPA for a tolerance for pendimethalin, a new preemergence herbicide, for weed control on garlic. The program was then approached by onion growers to assist with a similar clearance on onions. Working with state and federal scientists, IR-4 developed field and residue data and petitioned EPA for a dry bulb onion tolerance for pendimethalin. With cooperation from researchers, growers, EPA and the registrant, the entire process from research to registration was completed in four years.

Of interest is the fact that pendimethalin provides more effective weed control and controls a broader spectrum of weeds at only 1/10 the rate compared to the major alternative, thus reducing the overall environmental pesticide load. The added benefit to farmers is that the newly registered herbicide costs only 1/5 as much per acre as the alternative. We were told by the industry that without the pendimethalin registration, many of the onion farmers in the U.S. would have been forced out of the onion business.

Forage Grasses. IR-4 recently interceded on behalf of range grass growers and livestock ranchers to save the registration of permethrin for the control of range caterpillars. The original petition for this use was obtained by IR-4 in 1983 and permethrin was registered for this use in 1984.

A letter from the New Mexico Department of Agriculture describes the threat. "New Mexico has been plagued with the range caterpillar since 1967. This insect not only destroys forage grasses but leaves behind their molted skins that contain toxic spines. The toxin causes swelling in the mouths of livestock and they will refuse to graze in the area."

According to Dr. Ellis Huddleston, Professor at New Mexico State University, "Dosages as low as 0.05 grams per acre of permethrin are highly efficacious as compared with 113 grams of trichlorfon which was previously used. Under IPM, treatment of incipient populations (about 80,000 acres per year) appears to have been effective in preventing the extremely large outbreaks of the past (over 1,000,000 acres in 1978)."

In 1994, the registrants of permethrin announced that they planned to discontinue the registration of this insecticide on range grasses. IR-4 discussed this action with Dr. Huddleston, who affirmed that this minor use was still a major need in his state. IR-4 contacted one of the product registrants and requested that they reconsider their decision. The registrant agreed to retain the use and the product continues to be available and is being used by farmers and ranchers in New Mexico.

CONCLUSION

IR-4 is the only public program addressing the needs of growers and nurserymen for the registration of pesticides and biologicals on minor crops. The program has been responsible for 4,400 food use clearances, 3,600 ornamental registrations and 68 biopesticide registrations. The success of the program is attributable to a coordinated effort involving federal and state agencies, commodity producers, product registrants, state and federal agricultural scientists and a team of IR-4 coordinators all working toward a common purpose. This program has the organization, expertise and guidance to move forward in expanding the product line for IPM-compatible biologics and other environmentally compatible products. We look forward to continuing our mission of serving both producers and consumers of minor crops by assuring an adequate supply of safe, effective and properly labelled pest control products.

IR-4 appreciates the support of Congress and urges favorable consideration for the 1997 USDA budget request for IR-4 in the CSREES Special Research Grant programs.

SAN DIEGO COUNTY WATER AUTHORITY

PREPARED STATEMENT OF MAUREEN A. STAPLETON, GENERAL MANAGER

Support for Colorado River Salinity Program Funding

It has been brought to my attention that the Colorado River Basin Salinity Control Forum has adopted a position supporting funding for the Bureau of Reclamation's Colorado River Salinity Control Program in the amount of $11,500,000. The San Diego County Water Authority (Authority) which supplies Colorado River water to over 2.6 million people in San Diego County, supports the Forum's request.

The Colorado River is the principal water supply source for the San Diego and southern California regions, and increasing salinity levels impact both our agricultural and urban water users. Because of our high dependence on the Colorado River, we believe it is essential that Salinity Control Program funding levels be, at a minimum, set at the level requested by the Forum.

The Authority thanks you and your subcommittee's support of this program in years past and hopes that you will again support funding to continue this valuable program.

Sincerely,

Maureen A. Stapleton
General Manager

SOIL AND WATER CONSERVATION SOCIETY [SWCS]

PREPARED STATEMENT OF NORMAN A. BERG, WASHINGTON, DC, REPRESENTATIVE

Mr. Chairman, members of the Subcommittee, the Soil and Water Conservation Society (SWCS) appreciates again being given time on your very demanding hearing schedule. May our full statement for USDA funding be included in the record? The Soil and Water Conservation Society fosters the development and application of science-based policies and practices for managing soil, water, and related natural resources in order to achieve sustainability. Many SWCS members are employees of agencies that you fund each year. I have been at your hearings this year when the Secretary, the Natural Resources Conservation Service (NRCS), the Farm Service Agency (FSA), and the Research and Education agencies defended their Fiscal Year 1997 funding requests. The questions from the Committee, and the answers from the witnesses, were in several cases qualified by potential implementation of Public Law 104-127 (April 4, 1996), a new Farm Bill. It seems obvious that several of the proposals now before you for FY'97 will require amending prior to final action on next year's appropriation. There could even be some modifications for the balance of this Fiscal Year, depending on the exact language and the outcome of USDA's rule and regulation process. Until that knowledge is available we have provided a table that shows the funds appropriated for FY'96 by Congress, (Public Law 104-37-October 21, 1995) compared to the Administrations proposals. The SWCS recommendations for FY'97 are directed at the funds needed for the agencies to carry out their conservation responsibilities this coming year. As we monitor the workload of the new Farm Bill, SWCS will be concerned that the requirement for additional technical support is taken into consideration.

Our statement supports a broad array of USDA programs. These include the activities related to research, extension, cost–sharing, credit, and technical assistance, that help landusers solve their soil and water conservation problems. From experience, we know that agencies prepared budget for FY'97 that traditionally exceed these amounts that are sent to you by the Administration. This year there will be reductions. These are difficult times, for all levels of government. The drive to reduce the deficit and to deal with the ever growing national debt has broad public support. Therefore, the FY'97 proposals for many complex conservation challenges

- faced by the people in NRCS, FSA, Extension, and Research, and their clients is probably less than they would be able to use wisely.

The Food Security Act of 1985 (FSA) and the Food, Agriculture, Conservation, and Trade Act of 1990 (FACTA) had several very significant conservation actions. The most staff intensive for the NRCS was the Conservation Compliance provision, which continues under the new Farm Bill. The deadline for 1.7 million landusers, with highly erodible cropland, to fully implement their conservation plans was January 1,1995. This provision of law is taken seriously. The drawdown of commodity stocks reflected in market prices, along with "Freedom to Farm" producers flexibility, will tempt some to abandon their stewardship responsibilities. The next few years will be a realistic test of producers' conservation compliance plans. Auditing of compliance with these plans is probably going to be accelerated, both within the USDA and by outside interests. Environmentalists will judge the future of a voluntary-incentive driven approach on the results of whether these conservation plans are fully implemented. If conservation plans are not implemented, the pressure will increase to seek a more regulatory approach by some of the organizations that supported all the conservation features of the '85, '90, and '96 Farm Bills. This is already an issue as Congress considers reauthorization of the Clean Water Act, especially the wetlands area that has been challenged.

USDA field office reduction is producing substantial dollar savings, along with USDA agency reorganization and downsizing of staffs. USDA has two important clienteles—the agricultural producers and the natural resource base of the country. The SWCS is concerned that in the attempt to reduce the dollars spent on serving agriculture we do not neglect the protection of our natural resources. As USDA streamlining is being analyzed the functions of agencies dedicated to conservation need special attention.

For a number of years NRCS has provided conservation assistance under the Rural Abandoned Mine Program (RAMP) within the Department of Interior. We urge Congress to provide funds this year for the RAMP program. It is unfortunate that monies collected for RAMP through taxes on coal companies have been kept by the government rather than appropriated for the purpose for which they were collected. The need to clean-up these problems remain.

Several of the funding levels recommended for FY'97 are most supportive of a strong infrastructure in USDA. Pollution prevention and environmental protection are a high priority. The Conservation Reserve and the Wetland Reserve Programs should be funded to allow additional bid openings in FY'97.

The 1990 Farm Bill had several conservation initiatives that were never implemented. We hope that is not to be the fate of new legislation. Funding for research is important in order to provide the information needed for critical resource decisions. At a time when we are all looking for community-based solutions, the RC&D's started out as an excellent example of public private partnerships. Our increased funding recommendations for RC&D is based on the record of that program in leveraging private funds and citizen involvement. The SWCS is dedicated to helping promote an ethic that recognizes the interdependence of all people and the environment. To that end we are concerned that the necessary resources will be in place to ensure that landusers continue their good work. Protection of the resource base, to be certain that the U.S. has a sustainable agricultural system, is important.

We join others in commending this Committee for your early action on the Fiscal Year 1996 appropriations Public Law 104-37 (October 21, 1995). Those agencies that have been subjected to several continuing resolutions to carry out their activities must view USDA with some envy. We would hope that your deliberations for FY'97 will produce another timely appropriations law for USDA and related needs.

You will note that SWCS has, for most items, supported the Administration's recommendations for FY'97 as realistic.

Thank you again for allowing SWCS testimony to be made part of your public hearing record.

SWCS's Fiscal Year 1997 Federal Funding Recommendations

USDA Agency	Enacted FY'96	Proposed FY'97	Recommended by SWCS
	(In millions of dollars)		
Natural Resources Conservation Service:			
Conservation Operations	538.0	565.0	565.0 (1)
Soil Surveys	77.0	78.0	78.0
Snow Surveys	6.0	6.0	6.0
Plant Materials	9.0	9.0	9.0
Grazing Lands (Authorized)			20.0 (2)
CO Subtotal	630.0	658.0	678.0
Watershed Surveys and Watershed Planning	14.0	19.0	19.0
Watershed Operations	100.0	116.0	116.0
Forestry Incentives	6.0	6.0	6.0 (3)
Wetland Reserve Program	77.0	188.0	188.0 (4)
Colorado Salinity	3.0	3.0	3.0 (5)
Water Bank	00.0	00.0	10.0 (6)
RC&D's	29.0	29.0	33.0 (7)
Great Plains Cons. Program	00.0	00.0	15.0 (8)
Subtotal	229.0	361.0	390.0
Total for NRCS	1,059.0	1,019.0	1,068.0
Farm Service Agency:			
Agricultural Resources Conservation Program (ARC)			
Conservation Reserve	1,836.0	1,992.0	1,992.0
Agricultural Conservation Program (ACP)	75.0	75.0	75.0 (9)
Emergency Program	13.8	15.0	15.0
Total for FSA	1,911.0	2,067.0	2 067.0
Research, Education, and Economics:			
Total funding requested for REE agencies is $1.8 billion, about the same as for FY 1996.		SWCS supports the budget proposal.	

SWCS Explanatory Notes

(1) Conservation Technical Assistance (565.0 m) Funds needed for NRCS and Conservation Districts to have field people required not only to carry out responsibilities in the '85, '90, and '96 Farm Bills, but to continue the important soil and water conservation work throughout the nation.

(2) The new Farm Bill authorizes seeking funds beginning at $20 million and building to $60 million.

(3) This program is reauthorized through 2002.

(4) This program is reauthorized through 2002.

(5) This program would be phased out by EQIP.

(6) The future of this program relates to around 700,000 WB acres still under prior contracts and needs clarifying.

(7) This program is reauthorized through 2002.

(8) This program would be phased out by EQIP, however present contract obligations must be serviced.

(9) This program would be phased out by EQIP.

UNIVERSITY OF SOUTHERN MISSISSIPPI

PREPARED STATEMENT OF DR. SHELBY F. THAMES, DISTINGUISHED UNIVERSITY RESEARCH PROFESSOR

Mr. Chairman, distinguished Members of the Subcommittee, I would like to thank you for this opportunity to provide testimony to you concerning the ongoing efforts of the University of Southern Mississippi (USM) and the Mississippi Polymer Institute. I would also like to repeat my expression of gratitude to the Subcommittee for its many years of leadership and support of the Institute and its work. This testimony will include an update on the progress of the Institute since my testimony of approximately one year ago. I requested this testimony because I am excited about the continuing progress of last year, and wanted to share my excitement.

In 1983, the Mississippi Legislature authorized the Polymer Institute at USM to work closely with emerging industries and other existing polymer-related industries to assist with research, problem-solving, and commercializing efforts. As an integral part of the basic research and educational mission of the Department of Polymer Science, the Institute provides industry and government with applied or focused research, development support, and other commercializing assistance. This effort complements existing strong ties with industry and government involving exchange of information and improved employment opportunities for USM graduates. Most important, through basic and applied research, coupled with developmental and commercializing efforts of the Institute, the Department of Polymer Science continues to address national needs of high priority.

A major goal of my work is in pursuit of commercializing the use of alternative agricultural crops, and their coproducts through focused research and product development. This approach offers an array of opportunities for agriculture as the polymer industry is the largest chemical products industry in the world, and heretofore has been highly dependent upon petroleum utilization. However, my efforts focus on the development of agricultural derived materials that can improve our nation's environment, and reduce our dependence on imported petroleum. As farm products meet the industrial needs of American society, rural America is the benefactor. Heretofore this movement to utilize alternative agricultural products as industrial raw materials has received some attention but much less than the opportunities warrant. Your decisions are crucial to the accomplishment of these goals as funding from this Subcommittee has enabled us to implement and maintain an active group of university-based polymer scientists whose energies are devoted to commercializing alternative crops. We are most grateful to you for this support and ask for your continued commitment.

The faculty, the University, and the State of Mississippi are strongly supportive of the Mississippi Polymer Institute and its close ties with industry. Most faculty maintain at least one industrial contract as an important part of extramural research efforts.

Polymers, which include fibers, plastics, composites, coatings, adhesives, inks, and elastomers, play a key role in the materials industry. They are used in a wide range of industries including textiles, aerospace, automotive, packaging, construction, medical prosthesis, and health care. In the aerospace and automotive applications, reduced weight and high strength make them increasingly important as fuel savers. Their non-metallic character and design potentials support their use for many national defense purposes. Moreover, select polymers are possible substitutes for so-called strategic materials, some of which come from potentially unreliable sources.

As a polymer scientist, I am intrigued by the vast opportunities offered by American agriculture. As a professor, however, I am disappointed that few of our science and business students receive training in the polymer-agricultural discipline as it offers enormous potential.

I became involved in the polymer field 32 years ago, and since that time have watched its evolution where almost each new product utilization offered the opportunity for many more. Although polymer science as a discipline has experienced expansion and a degree of public acceptance, **alternative agricultural materials are an under-utilized national treasure for the polymer industry.** Petroleum derived raw materials have heretofore made up the bulk of the raw materials for the polymer industry. However, there is less acceptance of petroleum derived materials today than ever before and consequently the timing is ideal for agricultural materials to make significant inroads as environmentally friendly, biodegradable, and renewable raw materials. These agricultural materials have always been available for our use yet society, for many reasons, has not recognized their potential. I would like to share with you several examples to support this tenet:

- A natural product has been identified, isolated and formulated into antifouling paints. Moreover, the compound is an active termiticide. For instance, wood treated with the agent will not produce rot fungi and thus are unattractive to termites. We are in the process of designing and synthesizing novel antifouling polymers for use in barnacle resistant paints. An industrial partner, the U.S. Paint Corporation of St. Louis, MO, has provided financial assistance to this program, and stands ready to commercialize this technology when development work is completed.

- A waterborne, water proofer has been designed and formulated with the help of several natural products. The material functions as a water proofer yet is carried in water. However, after application to the intended substrate, typically wood or cementous products, the material becomes hydrophobic and highly water resistant. We have collected one and one-half years of exposure data on this product with excellent success. It will be available on the retail market in 1996 via Southern Chemical Formulators of Mobile, AL.

- We have designed, synthesized and formulated a SOLVENTLESS emulsion coating. The novel technology used in this synthesis has been expanded to a wide variety of polymeric types and thus this technology should have wide application in the emulsion or latex coatings market. The significant advantage of this technology is the ability to produce a high performance, water borne, coating using only water as the carrier medium. Thus, essentially a solventless coating has been discovered and synthesized that performs as well or better than traditional latex products. This finding represents a significant discovery in polymer design and is successful only because a significant portion of this technology involves the use of an agricultural crop. Negotiations are currently underway with a raw material manufacturer who will synthesize and market the novel polymer forming raw material. A first draft of a patent covering this technology has been prepared and will continue until patent protection is achieved.

- A new, multifunctional polymer additive has been designed, synthesized, and tested. It is a highly efficient, multifaceted additive that functions as a dispersant, a defoamer, an adhesion promoter, a gloss enhancer, and corrosion inhibiting species. It is derived from an agricultural raw material and is very novel in its performance and applications. A draft patent has been prepared and this process will continue until patent protection is achieved.

- We are exploiting the potential of lesquerella, a crop that produces a triglyceride similar to castor oil. Several products have been prepared and include: polyesters, stains, foams, pressure sensitive adhesives, and 100% solid ultraviolet (UV) coatings. In fact, the latter technology, UV cured coatings, was highlighted at the most recent AARC/NASDA meeting in Washington, DC.

- Novel **open cell** foams have been designed and prepared from lesquerella. They are of high quality and can substitute for castor oil based foams used extensively in industrial products. In fact, scientists from the Department of the Army (Natick, MA) are currently investigation lesquerella based foams prepared and submitted by the Thames Research Group.

- During the most recent six months, novel **closed cell** lesquerella foams have been prepared from lesquerella derivatives and will be submitted for testing. This commercialization focus is attractive as castor foams are prepared from imported oil, i.e., at an annual $50-75 million import cost. Thus, emergence of a lesquerella oil industry has the potential to reduce U.S. imports.

- Flow, levelling, gloss, substrate protection, and environmental protection are qualities typically associated with organic soluble coatings and paints manufactured from vegetable oils. However, the use of organic solvents must end, as they are a major contributor to air pollution. Therefore, we are currently investigating lesquerella oil as a dispersion aid in the formulation of waterborne coatings with no VOCs. Our results have been most encouraging, particularly so since lesquerella oil dispersants function as superior hydrophobic additives. We have shown that novel lesquerella based dispersants contribute to excellent paint performance.

- All of America is concerned with the AIDS virus and the protection of health care personnel who minister to AIDS patients. Thus, there is an overpowering need for cut-proof and non-permeable gloves for health care personnel. Our group is pursuing a development program, in cooperation with a nationally known glove manufacturer, for the development of cut-proof, non-permeable gloves.

It is clear that commercial utilization of agricultural products is needed. However, we simply must devote more support and effort to this rewarding undertaking.

United States agriculture has made the transition from the farm fields to the kitchen tables, but America's industrial community has been frightfully slow in adopting ag based industrial materials. Let us aggressively pursue this opportunity and in doing so:

- Intensify U.S. efforts to commercialize alternative crops.
- Reduce U.S. reliance on imported petroleum.
- Maintain a healthy and prosperous farm economy.
- Foster new cooperative opportunities between American farmers and American industry.

Mr. Chairman, your leadership and support are deeply appreciated by the entire University of Southern Mississippi community. While I can greatly appreciate the difficult financial restraints facing your Subcommittee this fiscal year, I feel confident that further support of the Mississippi Polymer Institute will continue dividends of increasing commercialization opportunities of agricultural materials in American industry. Advances in polymer research are crucial to food, transportation, housing, and defense industries. We have sampled and established the value of ag products as industrial raw materials, and I believe it is time to move to another level of investigation with these efforts. Therefore, we respectfully request $1.2 million in federal funding to exploit the potentials of commercializing alternative agricultural materials and to continue our initiatives. Thank you Mr. Chairman and Members of the Subcommittee for your support and consideration.

SOUTHWEST ANIMAL HEALTH RESEARCH FOUNDATION [SWARHF]

PREPARED STATEMENT OF OCLERIS SIMPSON, DEAN, AGRICULTURE RESEARCH AND EXTENSION, LANGSTON UNIVERSITY

Mr. Chairman, this statement reflects a collaborative effort of two other persons, namely, Mr. Edwin Ketchum, Rancher and President of SWARHF and Mr. G.C. Puckett, Rancher and Treasurer of SWARHF. Accordingly, this statement is submitted in support of the Screwworm Program in USDA/APHIS. Our plea has as its basis, the

Civil Unrest at the deteriorating Production Plant in Mexico and the need to ascertain a new facility in Panama. The seriousness of the problem is amplified by the fact that the State Department has held up progress for about two years and the problem in Mexico may create a change in how the Production Plant is structured. If so, the cost on the U.S. side will increase and thereby further delaying our approach to Panama. Therefore, we are most respectively asking your committee to help by not balancing the Budget on the "Back" of the Screwworm Program. We have stated before and we repeat today...the program must have an additional $2.0mm/year for three (3) years in order to be saved and bury the Screwworm Fly in Panama. Until this will have been achieved, the cattle and wildlife industry in the South and the Southwest are at a great risk of being reinfected and possible lost.

The clipping of the Fiscal '97 Screwworm Budget as proposed by the Administration and prolonging our stay in Mexico is tantamount to stretching gasoline with water in hopes of making it to the next fuel station. Therefore, we again ask your committee to not accept the budget clip but instead make the SCREWWORM Program high priority and provide the additional $2.0 mm for three years so that the appropriate move of the SCREWWORM Program to Panama can take place.

TARRANT COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT

PREPARED STATEMENT OF JIM OLIVER, GENERAL MANAGER

Mr. Chairman, I am Jim Oliver, General Manager of the Tarrant County Water Control and Improvement District #1. Our District operates the surface water supply reservoirs which provide drinking water for over one and a half million people in North Texas including the cities of Fort Worth, Arlington, and 56 other communities and water districts. I come before you today to ask for the Committee's help in completing the Upper Trinity Basin Cooperative Study. In doing so, I am not asking for outlays of Federal funding directly to my water district, but rather to request your help in directing the NRCS to commit its own funds, in partnership with my District, which will allow us to bring this project to a successful completion.

Our funding needs for the final two years of the Upper Trinity Project began in the Fall of 1994, but to date, NRCS has refused to commit its own part of the funding to complete the project. Since the beginning of this year, we have secured letters of support from selected member cities and State agencies including Fort Worth, Arlington, and the Trinity River Authority as well as the Texas Natural Resources Conservation Commission and the Texas Water Development Board. On March 1, Congressmen Geren, Barton, Frost, Stenholm and Bryant along with Congresswoman Johnson sent a

Congressional letter to Paul Johnson of the NRCS endorsing this project. Our member cities were disappointed to receive a reply from NRCS on March 28 indicating that all FY96 funds for River Basin studies had been allocated and suggesting that we should not look to the national NRCS office for future consideration for the Upper Trinity Project. That response is what brings us before your Committee today.

To provide our customers with a reliable supply of drinking water, the Tarrant County Water District manages 4 large surface water reservoirs. Our reservoirs in our system are filling with silt and excessive nutrients from non-point source runoff. As a result, the useful life of these reservoirs may be many years shorter than what was originally anticipated. This means that our customer communities will have to pay hundreds of millions of dollars for additional reservoir construction decades earlier than currently anticipated.

Reservoir siltation and other non-point sources of pollution cause our customer cities to invest large sums of money to meet state drinking water standards through expensive improvements to water treatment facilities.

Our District is dedicated to serving our customers with safe, affordable water drawn from a reliable supply, but we cannot fulfill this mission unless we are able to address the problem of non-point pollution of our reservoirs.

In 1992, we identified a solution for our problem which called for combining the watershed data of the Natural Resources Conservation Service, the water quality data of our District, the expertise of the Blacklands Agricultural Research Center in Temple and Texas A&M University, along with new computer modeling capabilities which had recently been developed. These tools were united in the Upper Trinity River Basin Cooperative Study. The goal of this study is to develop a computer model which not only identifies the source of the non-point source pollution in our watersheds, but also evaluates the best management practice to solve the problem.

Armed with the information provided by the Upper Trinity River Basin Cooperative Study, our staff can approach landowners in our watersheds with practical, cost-sharing remediation strategies which protect both their land and our reservoirs. Since we are not a regulatory agency, we must work with landowners in a cooperative as opposed to an adversarial manner. We are already working with landowners on a limited basis using data from the NRCS Study, and are very encouraged by the initial response. The NRCS can apply this technology and watershed information throughout the United States. The computer model being developed by the NRCS Study can be used to identify non-point source pollution virtually anywhere in the country.

Funding for the Upper Trinity River Basin Cooperative Study has been provided by a local/State/Federal cost-sharing partnership which includes the support of our District, NRCS, the Texas Natural Resources Conservation Commission, and the Texas Water Development Board. The NRCS has invested $368,980 in the first phase of the project from 1992 to 1994. Our District, along with TNRCC and TWDB has added another $490,000 in cash. Finally, our District has added another $1,822,808 in water quality modeling expenditures in support of the project. The total combined funding commitment to date from all sources is almost $2.7 million. We believe that these kinds of partnerships are the best way to fund public projects in these times of severe budgetary constraints at every level of government.

Our District approached NRCS for the remainder of its commitment to the Upper Trinity River Basin Cooperative Study in the Fall of 1994. The District was assured by NRCS staff in Washington that the project and funding was still a priority. However, to date, there has been no funding made available to complete this vital project. This has delayed the completion of our project for more than a year and a half and that is what brings us before this Committee today. Let me once again emphasize that the Tarrant County Water Control and Improvement District #1 is not seeking any federal funding for ourselves to complete this project.

What we do ask is for your help in directing NRCS to commit $380,000 of funding in FY97 to complete this project. Combined with the financial support of our District, the $380,000 FY1997 commitment of funds from NRCS would bring the Upper Trinity Study to a timely, and we feel certain, a successful conclusion. The Upper Trinity Study depends upon combining knowledge, information and technology which is unique to each of the key participants. It would be impossible to complete the Study without the watershed modeling information possessed by the Natural Resources Conservation Service. I feel it would be a great waste for this project to be abandoned when it is more than half completed simply because of the lack of funding from NRCS.

Mr. Chairman, the NRCS is to be strongly commended for using its knowledge of watersheds in support of environmental protection. There is common agreement among all levels of government that the most cost-effective way to deal with pollution is to stop it before it occurs. One of the most daunting challenges for local government and for State and Federal regulatory agencies is how to identify and control non-point source pollution. The answer involves bringing new tools to bear towards understanding how pollution moves through our watersheds into our sources of drinking water. NRCS has played and will continue to play a vital role in helping water districts like mine to address this issue. Let me also say that it has been a great privilege to work the local individuals associated with NRCS and to draw upon their knowledge and experience.

We ask that the Congress encourage the NRCS to commit $380,000 in FY97 funding which will complete the federal cost-share and bring the Upper Trinity River Basin Cooperative Study to a successful conclusion. Thank you for your consideration.

TURFGRASS PRODUCERS INTERNATIONAL

PREPARED STATEMENT OF DOUGLAS H. FENDER, EXECUTIVE DIRECTOR

On behalf of Turfgrass Producers International, I appreciate this opportunity to provide the Subcommittee with the turfgrass industry's perspective in support of restoration of the $50,000 appropriation for the National Turfgrass Evaluation Program (NTEP) deleted in the President's fiscal year 1997 budget request for the Agricultural Research Service (ARS).

Turfgrass Producers International (TPI) is a 29-year-old, not-for-profit association of turfgrass sod producers with members in all 50 states, Canada and 34 additional countries. TPI represents over 650 turfgrass sod farm operations that produce approximately 80 percent of the acreage sold each year in the U.S. The 1992 U.S. Census of Agriculture reported sod sales to be in excess of $471,640,000. TPI represents its members on federal issues of importance, and adequate funding of the National Turfgrass Evaluation Program is an issue of significant concern to this organization's members.

The National Turfgrass Evaluation Program (NTEP) has been unique in that it provides a working partnership that links the federal government, turfgrass industry and land grant universities together in their common interest of turfgrass cultivar development, improvement, and evaluation. The National Turfgrass Evaluation Program is the primary means by which cultivated varieties of turfgrass are evaluated in this country. It provides unbiased information on turfgrass cultivar adaptations, disease and insect resistance, and environmental stress tolerance. The public and private sectors of the turfgrass industry use this information to develop cultivar recommendations for home owners, sod producers, sports turf managers and golf course superintendents.

At a time when this nation's awareness of environmental considerations is increasing, and because of the multiple benefits provided by turfgrass, as well as the advancements that are being made to further improve them through integrated pest management programs, recycling, and other means, the USDA has before it a unique opportunity to take positive action in support of the turfgrass industry, and similarly enjoy a tremendous return for what must be considered, in relative terms within USDA's budget, a minuscule investment of Department funds.

While the vast majority of the Department's funds have been and will continue to be directed toward traditional "food and fiber" segments of U.S. agriculture, it is important to note that turfgrass sod production is clearly defined as agriculture in the recently-passed Farm Bill and by many other Departments and Agencies. Further, it is estimated by the ERS that the turfgrass industry, in all its forms, is a $30-35 billion industry and that, despite recessions of the early 1980s and 1990s, grower cash receipts for floriculture and environmental horticulture crops continued to increase. According to the ERS, cash receipts reached $8.7 billion in 1991. It should also be noted that the turfgrass industry is the fastest growing segment of U.S. agriculture, while its receives essentially no federal support. There are no subsidy programs for turfgrass nor are any desired.

For the past 70 years, the USDA's support for the turfgrass industry has been present, if only at a very modest level. To sever totally its ties now with the industry by failing to support the National Turfgrass Evaluation Program would be considered by TPI to be a tremendous oversight of a major opportunity. USDA's past support of the NTEP program at the $50,000 level did not cover all costs. NTEP will continue to rely most heavily on industry support; however, it is essential that the USDA maintain its financial support for the NTEP because of the reliance so many in this industry have placed on this program's unbiased findings. To discontinue the USDA's financial support will also eliminate a highly reliable and credible level of objectivity that is associated with NTEP.

The members of Turfgrass Producers International respectfully request that the Subcommittee restore this vital $50,000 appropriation for the National Turfgrass Evaluation Program (NTEP).

Thank you very much.

TEXAS A&M UNIVERSITY

PREPARED STATEMENT OF DR. EDWARD A. HILER, VICE CHANCELLOR, AGRICULTURE AND LIFE SCIENCES

Mr. Chairman and members of the Committee, I am Ed Hiler, Vice Chancellor for Agriculture and Life Sciences in the Texas A&M University System. I appreciate the opportunity to appear before you today, to describe a few exciting research projects we have underway, and to ask for your support for continued federal funding. New technology has been, and will continue to be, the life blood of American agriculture. With the prospect of a phase down for federal farm programs, it is imperative that research continues providing a technological underpinning for agriculture. Today, I will describe several examples of how we can provide this underpinning.

CENTER FOR SOUTHERN CROP IMPROVEMENT

The Center for Southern Crop Improvement was established to accelerate application of molecular tools for improving crops grown in Texas and the southern United States. This $15 million facility is jointly funded by Texas A&M University and a USDA Building and Facility grant. The Center is located on the Texas A&M University campus, and includes a 67,000 square foot research building, a 25,000 square foot greenhouse, and controlled environment chambers for plant research. Center research addresses plant tissue culture, crop genome analysis, production of transgenic crops, and cultivar testing. The Center is facilitating efforts to tag and isolate agronomically important genes for use in southern crop breeding programs. Isolated genes include those that control important traits such as drought tolerance, disease and insect resistance, cotton fiber and seed quality, and food quality. When isolated, these genes are used to engineer improvements in southern crops, including cotton, sorghum, rice, wheat, peanuts, trees, grasses, and vegetables. As partial evidence of this Center's value to improving crops, Center scientists have recruited grants exceeding $2.0 million in Fiscal Year 1995-96. This includes a grant to focus on improving cotton, a cooperative activity between industry, Texas Tech University, USDA/ARS and Texas A&M University. Developing molecular tools for crop breeders accelerates plant improvement efforts. It also ensures increased profitability for farmers, better produce for consumers, and new biomaterials for national and international markets. **We are requesting continuing support for this project at $5.9 million, which is the balance of the original request of $7.0 million.**

WOOL AND MOHAIR RESEARCH

The phase out of the wool and mohair incentive payments leaves the United States sheep and Angora goat industry in a precarious position. In fact, pessimism is widespread concerning the future of the industry. We believe the U.S. needs to maintain a viable and competitive sheep and goat industry for efficiently using feed resources, and for supporting an existing wool and mohair infrastructure across the nation. This is especially important for the large areas of semi-arid U.S. lands that provide few options for alternate agricultural enterprises. The research to be funded by this request will emphasize development and expanded use of an objective fiber measurement process (i.e., yield, fiber diameter and vegetable content). Nutrition, management, selection, harvesting, and marketing also define the outcome of these objective measurements. Scientists in Texas, Montana, and Wyoming have conducted research on technology and new fiber testing instruments. Results from this work has contributed significantly to acceptance of before sale preparation and objective-measurement of U.S. wool. About 50% of the U.S. wool clip was measured with the objective process in 1995, versus less than 15% in 1985. Approximately 25% of all wool sold in the U.S. is now objectively measured before sale. This kind of measurement permits using a value based marketing system. Texas Agricultural Experiment Station scientists recently developed image analysis applications for measuring most of the important characteristics of wool, mohair, and cashmere. This technology has the potential to revolutionize fiber measurement, reduce the cost of testing, and make measurements available to more people throughout the industry. However, before the industry fully accepts these innovative practices for product selection and marketing, more research is necessary to further refine rapid, accurate objective fiber measurements. The needed research will assist in developing new markets, and will enable producers to become more competitive in existing markets. **We are requesting continued support of this project at $250,000.**

FARM LEVEL IMPACTS OF AGRICULTURAL POLICY AND LIVESTOCK AND DAIRY POLICY ANALYSIS

Texas A&M University is pleased with the support you have provided through two special appropriations, one for the Regionalized Farm Level Impacts of Agricultural Policy project which is jointly funded with the University of Missouri at a level of $294,000 in FY 1995, and the other for the Livestock and Dairy Policy Analysis project which is jointly funded with Cornell University at a level of $445,000 in FY 1995.

These two projects allow the Agricultural and Food Policy Center (AFPC) to respond to congressional requests for analysis on regional impacts of changes in government policy, including policy on farm, tax, trade, regulation, monetary, and fiscal matters. As evidence for an increasing need for these kinds of projects, the AFPC conducted 21 official working papers in 1995 plus 6 additional analyses on special issues for Members of Congress. This compares to the Center's average 10-13 working papers per year between 1990 and 1994.

Regarding the Regionalized Farm Level Impacts of Farm Policy program, the AFPC is currently working with the University of Missouri, Iowa State, and Cornell University to analyze farm bill options that run the gamut from commodity program elimination to fine tuning the status quo. Results of these analyses will enhance Member understanding on the economic impact of potential policy changes to the agriculture producer, agribusiness infrastructure, consumer, taxpayer, financial intermediaries, and food costs for social programs such as social security and other inflation-indexed mandatory programs. This representative farm system analysis, and related analyses, would not exist without these special appropriations. **We are asking continued funding on the Regional Texas-Missouri project at $294,000 in FY 1996.**

The Livestock and Dairy Policy Analysis project is a joint effort between Texas A&M University and Cornell University, and supports a dairy policy education program that involves economists at the University of Wisconsin, Ohio State University, Pennsylvania State University, and Clemson University. Some of you may be aware that faculty at these universities have helped conduct a "dairy policy school" in the House of Representatives. Moreover, we have consistently made our faculty available to the Livestock Subcommittee for analyses of dairy policy options. The combination of property rights, endangered species, dairy policy, hog integration, pathogen reduction, grazing fees, and many other issues are all fertile areas for future livestock and dairy policy analyses by Cornell and Texas A&M. **In FY 1996, we have requested continued funding of this project at the level of $450,000.**

CENTER FOR NORTH AMERICAN STUDIES TEXAS A&M UNIVERSITY

The Center for North American Studies, now in it's third year of operation, has implemented several projects to promote cooperative study, research, policy analysis, and training. These projects are needed to resolve critical agricultural issues of common interest to the United States, Mexico, and Canada. The Center's primary focus has been on the impacts of NAFTA, particularly impacts on expanded trade and the associated public policy concerns. Though the Center is located at Texas A&M University, it has established strong cooperative linkages with Louisiana State University, Texas A&M University at Kingsville, and Texas A&M International University at Laredo. We are requesting continued funding to permit further development of these cooperative programs with universities in Mexico and Canada, and to permit training on a broad range of issues including NAFTA, natural resources, environment, food production and marketing, and food distribution. These programs will enhance access to research data, expand international experiences for students, and provide contacts for agribusiness firms exporting agricultural products. **We are requesting continued funding for this project at $300,000.**

DEVELOPMENT OF VEGETABLES AND FRUITS FOR PREVENTION OF LIFE-THREATENING DISEASES

In closing, let me briefly describe a new and very exciting research activity that is a joint effort between agriculture and medicine. Texas A&M is pioneering a research initiative to develop vegetables and fruits that can help prevent cancer, heart disease, strokes, and atherosclerosis. Medical scientists have documented that antioxidants such as beta carotene, quercetin, and vitamins C and E, can provide protection from these deadly diseases. Plant breeders have determined that levels of these chemicals range from zero to high in existing vegetable and fruit varieties. They also have determined that levels of these chemicals can be increased 30 to 50% from developing improved varieties of vegetables and fruits. This initiative will focus on determining the levels at which these compounds can become effective, or possibly toxic. This initiative brings together medical scientists from the University of Texas Southwestern Medical Center and M.D. Anderson Cancer Center, and plant scientists from the Texas and Arkansas Agricultural Experiment Stations. For the first time ever, the world's foremost cancer, heart, and circulatory disease centers will be linked with the nation's top vegetable and fruit improvement research centers to determine the effects of diet in disease prevention. The ultimate purpose of this research is to prevent disease using improved foods, a logical way to improve the nation's general health at the least cost. **We are requesting $5 million per year to fund an initial 5-year phase for this initiative.**

TEXAS TECH UNIVERSITY

PREPARED STATEMENT OF DR. SAM E. CURL, DEAN, COLLEGE OF AGRICULTURAL SCIENCES AND NATURAL RESOURCES

SUMMARY

PHASE II CONSTRUCTION FUNDS FOR THE USDA/ARS PLANT STRESS AND WATER CONSERVATION RESEARCH LABORATORY AUTHORIZED IN 1988 BY P.L. 100-339 AND A REQUEST FOR ENHANCED PROGRAM SUPPORT. The USDA/ARS PROGRAM AND LABORATORY LOCATED AT LUBBOCK, TEXAS, CONDUCTS RESEARCH IN COOPERATION WITH TEXAS TECH UNIVERSITY AND THE TEXAS AGRICULTURAL EXPERIMENT STATION.

SPECIFIC ACTION REQUESTED OF THE COMMITTEE: It is requested that Congress appropriate $7.3M to complement the $1.3M, $1.1M, $551,000, $1.051M, and $1.5M appropriated for FY 92, FY 93, FY 94, FY 95, and FY 96, respectively, for construction of Phase II of the Plant Stress and Water Conservation Research Laboratory authorized in 1988 by the 100TH CONGRESS through PUBLIC LAW 100-339. Construction funds of $500,000 were appropriated for Phase I of Laboratory construction, a research greenhouse-headhouse, which has been constructed. Total construction costs for Phase II of the project will amount to $12.8M. Architectural and engineering planning for Phase II (main laboratory) has been completed. Bid documents have been prepared. The building will be constructed on the Texas Tech University campus on a 50 acre tract of land leased to USDA/ARS by the Texas Tech University Board of Regents.

A request is also being made for a $300,000 increase in FY 97 operational support for the Plant Stress and Water Conservation Research Program. The program has received level funding for the past six years, and it is critical that the research effort, which will continue to focus on understanding the genetic control of plant mechanisms which facilitate drought and heat tolerance in crop plants, move forward.

JUSTIFICATION: The action of the federal government in 1988 through PUBLIC LAW 100-339 authorizing a plant stress and water conservation research laboratory and program at Lubbock, Texas was very timely and will have a substantial impact on food production and environmental quality for decades to come. The

Greenhouse Effect resulting from increased atmospheric carbon dioxide, Global Warming induced climatic changes, and the extensive drought during the summer of 1988 and during the ensuing years in California are ready examples of the fragility of our managed and natural ecosystems, and the potential for reduction in food and fiber quantity from even modest changes in weather patterns.

The formal plant stress and water conservation program was initiated in 1979 after 20 years of feasibility studies and planning by agencies of the federal government. The federal government through USDA/ARS, and the State of Texas through Texas Tech University and the Texas Agricultural Experiment Station, have put in place over the last 16 years a comprehensive-integrated program in which 18 senior scientists are today working to develop improved crop plants and planting systems that will provide for economically optimal crop production under variable, extreme environmental conditions. Scientists with expertise in the broad areas of genetics, breeding and molecular biology; biochemistry and physiology; and climatology, soil science and systems research have research programs poised for the challenges of the predicted climatic changes forecast within the next several decades. This program will be greatly enhanced, and its potential fulfilled, with the construction of a laboratory on the Texas Tech campus in conjunction with a broad array of established basic sciences. The requested program funds will partially offset inflation and rising costs during the past six years and allow the continuum of technology transfer from laboratory molecular technologies to field applications of genetically modified plants exhibiting improved stress tolerance.

INTRODUCTION

Mr. Chairman, I greatly appreciate the opportunity to provide a written statement to the Committee to request that Congress appropriate $7.3M for construction of Phase II of the USDA/ARS Plant Stress and Water Conservation Research Laboratory at Lubbock, Texas, authorized in 1988 by the 100TH CONGRESS through PUBLIC LAW 100-339. We are also requesting that Congress appropriate $300,000 to enhance the research program and for operation of the greenhouse. The research effort will continue to focus on understanding the genetic control of plant mechanisms which facilitate drought and heat tolerance in crop plants This vital research is encompassed in the comprehensive nationwide research mission of the U.S. Department of Agriculture/Agricultural Research Service, and the research program implements the recommendations of the Plant Stress and Soil Water Conservation feasibility study prepared by the USDA/ARS.

The action of the Federal Government in 1988 through PUBLIC LAW 100-339 authorizing a plant stress and water conservation research laboratory and program at Lubbock, Texas was very timely and will have a substantial impact on food production and environmental quality for decades to come. The Greenhouse Effect resulting from increased atmospheric carbon dioxide and other gases, Global Warming induced climatic changes, and the extensive drought in the summer of 1988 and during the ensuing years in California are ready examples of the fragility of our managed and natural ecosystems, and the potential for reduction in food and fiber quantity from even modest changes in weather patterns.

The background setting for the problem which the research program addresses is found in Senate Document 59, the feasibility study conducted by the Science and Education Administration of USDA in 1977, and the statement of Texas Tech University submitted for the record before this committee on March 26, 1979. We will not repeat this information, as the record is replete with scientific and economic documentation prepared by a select committee which describes the conditions of the region and the research required to seek viable solutions to a complex set of critical problems confronting the areas of agriculture, natural resource conservation and environmental protection. The need for a comprehensive, multidisciplinary, long-term basic science research program is obvious. Texas Tech University has taken the lead in the development of a cooperative research program with the USDA/ARS, the Texas Agricultural Experiment Station, colleges, universities, and federal laboratories throughout the region, agricultural producers, the agribusiness industry, and private research organizations.

BACKGROUND

The key planning events involving Texas Tech University which have taken place in conjunction with the development of the research program and laboratory to date are as follows:

1975-1976: Preliminary discussions with officials of the U.S. Department of Agriculture and members of the Congress.

1977-1978. Congress appropriated $100,000 for a feasibility study. The study team concluded that there was an urgent need for a plant stress and water conservation research program and that Lubbock, Texas, was the ideal location for a laboratory facility. A later decision to locate the facility on the campus of Texas Tech University, in conjunction with the College of Agricultural Sciences, finalized the first major step in the development of the program.

1978-1979 Congress appropriated $800,000 for the preparation of a research program plan and architectural and engineering plans for the appropriate laboratory in which to carry out the proposed research. The Science and Education Administration in August, 1979, transferred a USDA/ARS scientist (plant physiologist) to Lubbock, Texas to serve as a cooperative scientist working with Texas Tech and Texas Agricultural Experiment Station scientists on environmental stress mechanisms in sorghum and cotton. Texas Tech provides office and laboratory space and use of the library, computer, and other University facilities as well as extending full faculty privileges to the USDA/ARS scientists.

1980-1981: Congress appropriated $200,000 to initiate basic research on the problem.

1983-1984: Congress appropriated funds for completion of the architectural and engineering plans.

1988-1989: Congress passed and the President signed into law PUBLIC LAW 100-339 which authorizes construction of the Plant Stress and Water Conservation Research Laboratory on the campus of Texas Tech University.

1989-1990: Congress appropriated $500,000 to construct Phase I of the Plant Stress and Water Conservation Research Laboratory.

1990-1991: Congress appropriated $600,000 to complete the architectural and engineering plans for Phase II (the main laboratory) and $75,000 to enhance the ongoing cooperative research program, bringing total research program funding to $1,675,000.

1991-1992: Congress appropriated $1,300,000 for initiation of construction of Phase II (the main laboratory).

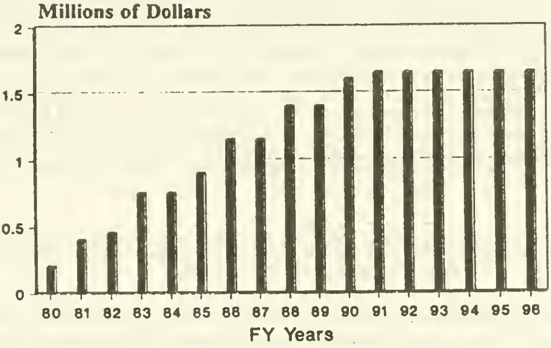
1992-1993: Congress appropriated $1,100,000 toward construction of Phase II (the main laboratory).

1993-1994: Congress appropriated $551,000 toward construction of Phase II (the main laboratory).

1994-1995: Congress appropriated $1,051,000 toward construction of Phase II (the main laboratory).

1995-1996: Congress appropriated $1,500,000 toward construction of Phase II (the main laboratory).

Annual Funding for the Plant Stress and Water
Conservation Research Program



RESEARCH MISSION AND ACTIVITY TO DATE

The mission of the Plant Stress and Water Conservation Research Program is to develop a detailed understanding of how plants survive and grow when exposed to extreme temperatures and limited moisture. This knowledge is used to develop improved varieties and crop production systems for cotton, wheat, sorghum and forage crops that insure greater water use efficiency, improved drought tolerance and increased winter hardiness. This research is critical to the future success of the agricultural industry of the Great Plains region of the central U.S. where environmental extremes cause millions of dollars of losses in crop production each year. Reduction of these annual losses would stabilize the economy of this region while improving the ability of the American farmer to compete in domestic and export markets for agricultural commodities. The Plant Stress and Water Conservation Research Program has concentrated in three specific areas: Stress Physiology; Genetic Enhancement; and Advanced Production Systems.

Stress Physiology:

The specific objective of research in stress physiology is to identify and understand the structural and biochemical mechanisms in higher plants that could mediate the impact of environmental extremes. These studies have concentrated on the evaluation of those weed and crop species which grow in the driest deserts and coldest regions of our planet. Scientists have isolated specific morphological modifications, enzymes and proteins that drastically reduce the damage caused to plants exposed to environmental stress. Only recently have the first of the hundreds of genes available from these exotic species been fully characterized.

Genetic Enhancement:

Plant physiologists work cooperatively with molecular biologists to isolate the specific DNA sequences needed to synthesize the unique proteins and enzymes that reduce environmental stress. The plant stress DNA sequences are combined with other regions of DNA that regulate gene expression to insure that the selected stress genes are "turned on" only when the crop plants are exposed to specific environmental conditions. These carefully designed plant stress genes are then introduced into bacterial cells to generate the millions of additional copies needed for incorporation into a crop plant.

Cell biologists have developed several innovative techniques to introduce these genes into individual cells or intact plants of cotton and alfalfa. Only in a small proportion of the cells exposed to the plant stress genes will the introduced DNA be incorporated into the original DNA of the crop species resulting in a transformed plant. Scientists worldwide are still working on similar techniques to allow transformation in wheat and sorghum.

Plant breeders and molecular biologists have only recently begun to select among thousands of transgenetic plants for appropriate expression of the introduced genes. Only after extensive and carefully controlled evaluation under laboratory conditions are transformed plants evaluated under field conditions.

Agronomists are evaluating the impact of row orientation, row spacing/plant populations, nitrogen fertilization and water management to optimize economic yields under both dryland and irrigated conditions. These cultural practices have a drastic impact on the efficiency of critical physiological processes such as photosynthesis, nitrogen metabolism and carbon metabolism as well as soil water and crop canopy temperature relationships. Optimization of the soils and crop production environment is essential to ensuring economic crop production.

POTENTIAL ECONOMIC IMPACT

Insuring that the U.S. farmer is economically competitive in both domestic and export markets is essential to the future of American agriculture. Use of genetically enhanced varieties and advanced production systems to improve the efficiency of producing major crop commodities has the potential to revolutionize American agriculture. These technologies are beginning to be applied in specific production regions worldwide to improve the efficiency and stability of crop production. Any country or geographic region not participating fully in this revolution will become increasingly less efficient and less competitive in both domestic and international agricultural markets. If the agricultural industry of the Great Plains is to survive in this highly competitive global environment, it is essential that the U.S. move ahead in the application of leading edge science to this industry. The successful efforts of the Plant Stress and Water Conservation Laboratory will allow future generations of American farmers to efficiently produce crops for food during extremely cold winters or hot, dry summers and in direct competition for international crop commodity markets.

PREPARED STATEMENT OF THE U.S. AGRICULTURAL EXPORT DEVELOPMENT COUNCIL

The U.S. Agricultural Export Development Council (USAEDC) is an organization of 76 agricultural associations that work to increase world demand for U.S agricultural and forestry products. We appreciate this opportunity to present to you our funding recommendations for fiscal year (FY) 1997.

The United States remains one of the world's top exporters of agricultural products. During fiscal year 1995, U.S. agricultural exports were worth more than $54 billion, and exports for FY 1996, the current fiscal year, are expected to reach $60 billion.

The direction of U.S. agricultural policy continues to be towards a greater reliance on exports and the marketplace. The new farm bill takes a major and historic step in that direction, and promoting U.S. agricultural exports through these self help cost-sharing programs is vital to maintaining and increasing agricultural exports.

However, our export success is a necessity, not a luxury. Without agricultural exports, we would lack outlets for the production from about 25 percent of our crop land. Farmers' cash receipts would fall by some 20 percent. If the exports predicted for FY96 suddenly vanished, more than 1 million American jobs and nearly $83 billion in economic activity would be lost. The economic worries so many Americans already face would be compounded.

Given those facts, and the stiff competition we face from other exporters for foreign markets, one would think that the United States would be investing all it could into developing foreign markets for U.S. agricultural products. And, in fact, a lot *is* being done. But we could — and should — do much more.

What's Being Done

Most of what already is being done is through the U.S. Department of Agriculture's Foreign Agricultural Service (FAS). The primary mission of FAS is to expand and maintain overseas markets for U.S,. food and agricultural products. As part of that mission, FAS administers a variety of commercial export programs that are vital to the continued success of our promotional activities. These include the Foreign Market Development Cooperator (FMD) program, the Market Access Program (MAP -- formerly known as the Market Promotion Program, or MPP), the Export Enhancement Program and the Dairy Export Incentive Program (DEIP).

The FY97 budget provides a total program level for FAS of $180 million. Of this, $137 million is direct funding for FAS programs and administrative expenses, an increase of $12 million or 9 6 percent above the 1996 level. Three quarters of this increase, or $9 million, is allocated to FAS foreign market development funding, for a total funding level of $58 million.

We support these budget increases, as far as they go. However, we do not believe they go nearly far enough.

Foreign Market Development Program

We support the increase of FAS funding allocated to foreign market development to $58 million. However, we believe that not nearly enough of that money is being allocated to the very successful cost-sharing program in which FAS and the USAEDC members (also known as cooperators) have been partners for more than 40 years. The program is known as the Foreign Market Development, or FMD, program.

The USAEDC members represent most of this country's 2 million agricultural producers, some 2,000 forest product companies, 1,500 farmer cooperatives, and more than 8,700 processors and handlers of U.S. farm products. Under the FMD program, these individuals and groups invest their own money, in the form of voluntary contributions and assessments, to support market development activities for agricultural products. FAS traditionally has shared the cost of these activities.

Unfortunately, FAS's contribution to the FMD program has declined, even as its overall funding for foreign market development has risen. Of the $58 million budgeted for FY 1997, less than 45 percent --- about $26 million --- has been earmarked for the FMD cost-sharing program.

In 1990, the picture was far different. FAS spent only about $39 million on foreign market development. However, of that amount, nearly 75 percent --- $31 million! --- went to the FMD program.

Put another way, over the past seven years, FAS's foreign market development funding has risen nearly 50 percent. However, over the same time period, FMD cost-share funding has *declined* by more than 10 percent *in real dollars*. When adjusted for inflation, the gap is even wider.

We don't think this makes much sense. In an era where government policy aims to encourage the private sector, cutting support for a public-private partnership sends a contrary message. And in an era where our trade competitors already spend far more money on market development than we do, cutting our investment in market development is nothing less than market abandonment. If we abandon those markets, we also abandon exports, jobs and a proven route to prosperity.

Of course, no one wants to do that. And we don't have to. A good start toward keeping the markets we already have --- and growing new ones --- would be to start restoring the cooperator's traditional share of FAS foreign market development funding. We believe that of the $58 million allocated to FAS for foreign market development, $40 million is needed to enable the cooperators to continue to do their work effectively. That would result in a share of about 69 percent of the budget, closer to the level in 1990.

Market Access Program

For another successful program, the Market Access Program (MAP), the picture is even worse. The administration originally proposed that funding for this initiative be held to last year's $110 million level. However, with the passage of the 1996 farm bill, that funding is being cut more than 18 percent to $90 million.

This is important because the Market Access Program is a *jobs program* that works. Over one million Americans today have jobs which depend on U.S. agricultural exports. MAP helps maintain and create needed jobs here at home because the program focuses on high-value and value added products. Every billion dollars in additional agricultural exports, for example, helps create as many as 20,000 new jobs.

The MAP also helps foster stronger domestic economic growth and an expanding tax base. For example, agriculture-related exports of nearly $60 billion this year will help generate more than $100 billion in economic activity, result in a positive trade balance of more than $20 billion, thereby reducing our nation's overall trade deficit, and will provide an additional $8 billion or more in new tax revenues.

All of this has been achieved in a way that is extremely cost-effective. Studies by USDA show that every dollar invested has translated to $16 in additional exports. Further, the program has been administered on a cost-share basis with farmers, ranchers and others having contributed as much as 50 percent toward its cost in order to be eligible to participate. Clearly, the program more than pays for itself.

Finally, if we aren't willing to spend the money to promote our products -- whether it's under the MAP, FMD or any other program --- other countries will be all too willing to grab our markets. In 1995, the first year that the Uruguay Round agreement took effect, European Union (EU) export subsidies for horticultural products alone were nearly three times as much as U.S. MAP funding for *all* commodities. Over a recent five-year period, the EU outspent the United States 10 to 1 for export subsidies. Another competitor, Australia, spent nearly $123 million to promote agricultural exports in 1995 --- a far larger proportion of its total agricultural export value than what the United States spends. In the face of such competition, we shouldn't be asking whether we can afford to maintain funding for the MAP. We should ask if we can afford *not* to.

Other U.S. Export Promotion Programs

We support the administration's funding recommendations for other programs such as the CCC Export Credit Guarantee programs, the Export Enhancement Program (EEP), and the Dairy Export Incentive Program (DEIP).

Under the Export Credit Guarantee programs, the government guarantees the repayment of commercial credit extended to finance U.S. export sales. Generally, export credit is made available to developing and middle income countries with foreign exchange constraints that would be unable to buy U.S. agricultural products if commercial credit were not available. Under the administration's proposal, the overall program level would be reduced somewhat from 1996, but would more accurately reflect recent levels of sales activity in the programs.

The other programs are export subsidy programs that make bonus payments available to U.S. exporters. The bonus payments enable the exporters to offer more competitive prices for their products and sell in targeted overseas markets where competitor countries are subsidizing sales. Under the terms of the Uruguay Round trade agreement, the export subsidy practices of all agricultural exporting countries are being reduced. The reductions in U.S. funding for these subsidy programs reflect the U.S. commitments under the Uruguay Round agreement.

Foreign Assistance Programs

The Food for Peace Program, or P.L. 480, is the primary means by which the United States provides food assistance. For FY97 the administration proposes a total program level of just over $1.1 billion, down $77 million from FY96. Because we recognize that this reduction has been imposed to meet constrained spending targets for U.S. international programs, we urge the committee to attempt to at least maintain the funding at FY95 levels.

Conclusion

We are pleased that FAS is receiving more foreign market development funding, and we appreciate the administration's efforts to maintain a strong and effective MAP. However, we are very concerned that continued funding reductions to the MAP program will undermine its viability. We are also gravely concerned about the administration's continued reduction in its contribution to the FMD program, despite significant increases in overall foreign market development funding.

While U.S. agricultural exports are projected to reach a record $60 billion this year, there is much more to be done and significant growth opportunities ahead. Asia, for example, is growing rapidly as a market for both bulk and value added agricultural products. The only question is whether we want to be a part of that growth? Do we want to take advantage of this opportunity which will increase American jobs and prosperity?

We should not depend on fate, chance, or macroeconomics to increase our exports for us. We believe that it is imperative that FAS's investment in both the Cooperator FMD program and the Market Access Program be funded at the highest levels.

PREPARED STATEMENT OF THE UNITED STATES TELEPHONE ASSOCIATION

SUMMARY OF REQUEST

PROJECT INVOLVED:	Telephone Loan Programs Administered by the Rural Utilities Service.
ACTIONS PROPOSED:	Supporting RUS loan levels for the hardship, cost of money, Rural Telephone Bank and loan guarantee programs in FY 1997 in the same amount as loan levels specified in the FY 1996 Agriculture Appropriations Act (P.L. 104-37). Also supporting an extension of the language removing the 7% interest rate cap on cost of money loans for FY 1997. Also supporting continuation of the restriction on the retirement of class A Rural Telephone Bank stock in FY 1997 at the level contained in P.L. 104-37. Supporting additional funding in new loan and grant authority designated for distance learning and telemedicine purposes as authorized in the Farm Bill.

INTRODUCTION

The United States Telephone Association (USTA) represents over 1000 local telephone companies that provide over 95 percent of the access lines in the United States. USTA members range from large publicly-held corporations to small family-owned companies and cooperatives owned by their customers. I present this testimony in the interests of the members of USTA and the customers they serve.

Local telephone companies are dedicated to fulfilling two goals: serving the nation's telecommunications needs and maintaining universal service at reasonable rates. USTA members, both large and small, firmly believe that the targeted assistance offered by a strong and viable telephone loan program remains essential in order to maintain a healthy and growing rural telephone industry that contributes to the provision of universal telephone service. We appreciate the strong support this committee has provided for the telephone program since its inception in 1949 and look forward to a vigorous program for the future.

RECOMMENDATIONS

Continuation of the loan levels and associated subsidy amounts for the RUS telephone loan programs that were recommended by this committee and signed into law for fiscal year 1996 would maintain our ability to adequately serve the nation's telecommunications needs and to maintain universal service. Through a dramatic restructuring, carefully and thoughtfully accomplished by Congress, the RUS telephone loan programs have more than met their responsibility to contribute to fiscal restraint and should be continued at their present levels of investment in the infrastructure of rural America.

Request Support for Streamlining and Deregulation

Those administering the RUS telephone loan programs have proposed, through administrative processes, to streamline RUS procedures, reduce paperwork burdens on RUS borrowers, automate antiquated systems, and deregulate to the extent consistent with preservation of the government's loan security. We heartily support these efforts and recommend that Congress support them as well by appropriating sufficient funds to accomplish them expeditiously.

Request Support for Elimination of the 7% cap on Cost of Money Loans

Last year, Congress also eliminated the seven percent "cap" placed on the insured cost-of-money loan program. If long term Treasury interest rates exceeded the 7% ceiling contained in the authorizing act, adequate subsidy would not be available to support the program at the authorized level. This would be extremely disruptive and hinder the program from accomplishing its statutory goals. Accordingly USTA supports continuation of the elimination of the seven percent cap on cost-of-money insured loans in FY 1997.

Request Support for Continued Restriction on Retirement of Government Stock in the Rural Telephone Bank

The restriction on the retirement of the amount of class A stock by the Rural Telephone Bank, adopted last year, should be continued. To do otherwise would risk a retirement of 51% of the class A stock unilaterally by the Administration without the approval of Congress. There has been no consultation by the Administration with the Congress about the effects of this abrupt potential action on the Bank, its stockholders, borrowers and the customers they serve. Also, the study the Committee requested of the Administration on this matter has not yet been conducted.

Clarification of the Subsidy Authority Necessary to Maintain Rural Telephone Bank Loan Levels

USTA supports sufficient subsidy authority to continue all the telephone loan programs at last year's levels, including the Rural Telephone Bank. However, we question the calculation of the subsidy amounts specified in recent years. Despite stable or decreasing interest rates, the amounts have dramatically differed, from under $100 thousand to several million dollars per year. It is our view that since the Bank, by law, must charge its borrowers its cost of money, and since the interim interest rate it charges borrowers until its cost of money is calculated is always higher than its cost of money determined at the end of each fiscal year, a subsidy is not required for the Bank to accomplish the loan level selected by the Committee. It is a misinterpretation of the credit reform law to force this Committee to appropriate funds to subsidize the difference between the Bank's cost of money and the government's cost of money when that difference is created by the purchase of Class B stock in the Bank by the borrowers themselves.

Furthermore, unlike the Bank's calculation of its cost of money and therefore its interest rate for fiscal year 1996, any subsidy for the Bank determined by this Committee to be necessary to enable the loan level to be maintained, should not be included as a cost of money to the Bank for fiscal year 1997. Borrowers and their subscribers, through higher interest rates and therefore higher subscriber rates, are being forced to pay for funds which Congress has appropriated to allow low cost funds to be available

Recommended Loan Levels.

USTA recommends telephone loan program loan levels for fiscal year 1997 as follows:

RUS Insured Hardship Loans (5%)	- $ 70 million
RUS Insured Cost-of-Money Loans	- $300 million
Rural Telephone Bank (RTB) Loans	- $175 million
Loan Guarantees	- $120 million

Distance Learning and Telemedicine

The recently enacted Farm Bill authorizes a new loan and grant program for distance learning and telemedicine. The demand for distance learning and telemedicine applications in rural areas is great. Demand for the existing Distance Learning Medical Link (DLML) grants has far outstripped the amount of funds available. The new distance learning and telemedicine program authorized in the Farm Bill would be available to service providers, end users and current electric and telephone program borrowers. USTA strongly supports funding the new program for FY 1997.

A CHANGING INDUSTRY

As this Congress recognized through passage of the Telecommunications Act of 1996, the telephone industry is in the midst of one of the most significant changes any industry has ever undergone. Both the technological underpinnings and the regulatory atmosphere are dramatically different. Without system upgrades, rural areas will be left out of the emerging information revolution. This will impact not only rural Americans, but people in urban areas that need to communicate with those in rural areas.

As the need for new services evolves, rural telephone systems must have access to low cost RUS financing to fund technological improvements such as digital switching equipment, access to services such as the Internet, updated switch software to provide advanced services and communicate with discrete signalling networks and associated data bases, and broadband fiber optic lines.

Congress recognized these increased requirements by mandating that each state complete a State Telecommunications Modernization Plan as a prerequisite for eligibility for insured and Rural Telephone Bank loans. The ambitious but necessary objectives contained in these plans will have an upward effect on loan demand.

Just as technology is rapidly changing, so is the regulatory structure of telecommunications. Increasing competition is forcing a trend towards cost based pricing. Local residential customers now shoulder a greater share of telephone network expenses. Rural areas tend to face higher costs, because the customer base is smaller and distances are greater between customers. The RUS telephone program targets assistance to these rural telephone customers. It keeps them on the network by both allowing reasonable prices and making affordable capital available to expand that network in rural America to meet the future needs of these customers.

THE RUS TELEPHONE LOAN PROGRAM AIDS RURAL DEVELOPMENT

In the information age in which we live, it is essential that rural subscribers be afforded advanced telecommunications services at a reasonable cost. New telecommunications services, essential for rural economic development, require infrastructure improvement through the deployment of new technology. There will always be a need for RUS's capital.

Without modernization of the rural infrastructure, economic growth will suffer and jobs will be lost. RUS telephone borrowers employ over thirty thousand rural Americans in their businesses directly and benefit hundreds of thousands indirectly. RUS loans have a multiplier effect - the minimal amount of RUS "seed" dollars stimulates business activity and creates jobs, thereby generating Federal, state, and local revenues.

RUS HELPS RURAL AMERICANS

The RUS telephone program benefits America. The program is a public-private partnership in which the borrower telephone systems are the conduits for benefits from the federal government to rural telephone customers, the true beneficiaries of the REA program. The RUS telephone program is totally voluntary. Companies that borrow do so to expand their customer base and modernize their network in order to improve service to their customers. The government's contribution is leveraged by the equity, technical expertise and dedication of local telephone companies and cooperatives.

In its 46 year history, the RUS telephone program has never had a default. The program costs amazingly little for the benefits the nation receives. Perhaps most importantly, it is an established and effective program to modernize the rural telecommunications infrastructure so necessary if this nation is to have universal availability of advanced telecommunication service.

RUS IS NEEDED MORE THAN EVER

It is increasingly clear that advanced telecommunications can overcome the rural disadvantages of long distance and low density and provide modem and high quality medical, business, educational, information and entertainment services to rural Americans. They come at a time when rural Americans continue the struggle to revitalize their stagnant economies. In light of the fact that Congress, government agencies and independent studies have indicated that telecommunications enhancement is a significant part of rural economic development, affordable capital to finance technological upgrading, especially in America's most remote areas, is needed now more than ever before.

Congress should continue to fund the only low-cost assistance it provides to help meet the telecommunications needs of our most rural communities. RUS has brought social and economic benefits to the most rural parts of the nation which more than ever, need to be part of the information superhighway for their very survival.

CONCLUSION

Assuring a strong and effective RUS Telephone Program through authorization of adequate loan levels will retain the worthwhile partnership between RUS telephone companies and rural consumers to the benefit of all Americans. Thank you.

THE WILDLIFE SOCIETY

PREPARED STATEMENT OF THOMAS M. FRANKLIN, WILDLIFE POLICY DIRECTOR

The Wildlife Society is pleased to provide comments on the Presidents' proposed FY 1997 budget for the COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE (CSREES) - U.S. DEPARTMENT OF AGRICULTURE. The Wildlife Society is the association of professional wildlife biologists and managers.

The Wildlife Society (TWS) recognizes that programs of the Cooperative Extension System (CES) effect positive changes in attitudes and implementation of new technologies by landowners, managers, community decisionmakers, and the public. This results in benefits to individuals and to the Nation through building and sustaining a more viable natural resource base and a competitive and profitable agriculture. Since over two-thirds of our lands, approximately 1.35 billion acres, are controlled by private landowners and managers, it is most appropriate that the CES, with its grass roots credibility and delivery system, be adequately funded to help the Nation's private landowners and managers use new technologies to move towards a more sustainable society.

The Wildlife Society noted that the President's FY 97 budget request continued level funding for Smith-Lever 3(b&c) funds at $268,493,000 and provided for a total of $423,488,000, including 3(d) items, which is a $4.262 million decrease from the FY 96 appropriation. The Society appreciates the Administration's continued support for Smith-Lever 3(b&c) base programs that provide "Block Grant" type funds for Land Grant Universities, providing educational outreach based on local needs assessment. However, we recommend a 4.0 percent increase for these programs; i.e., that Smith-Lever 3(b&c) funds be increased to $279,232,720, provided that not less than 35 percent of this increase be applied to Environmental Stewardship Education programs as part of Extension's Natural Resource and Environment Management (NREM) Education programs. This will enable NREM programs to cope with inflation and to retain the capability to redirect limited funding to address critical emerging natural resource and environmental issues

The Society supports expanding Extension programs in natural resource public issues education on such critical issues as wetlands and endangered species, as well as to strengthen its programs in urban and community forestry and environmental education as called for in he 1990 FACT Act. We are concerned that the Administration is not requesting an increase for Water Quality education in 1997. This is an area of significant concern for the Nation, and it must receive increased attention.

TWS supports the CSREES and State programs in Environmental Stewardship Education and NREM programs and encourages continuation of close cooperation between State CES's and their State Fish and Wildlife agencies, as well as other appropriate State and Federal agencies and conservation groups. Extension 4-H Youth natural resource programs and projects continue to increase with over 1,300,000 youngsters presently enrolled from both urban and rural communities across the Nation. Increased funding will enable Extension to carry out its environmental education and NREM National Strategic Plan obligations nationwide

The Society is disappointed, however, that the Administration did not support an FY 97 increase in the Renewable Resources Extension Act (RREA). The FY 96 funding increase was not adequate for the task at hand, and this program needs continuing support. The $500,000 increase for RREA in FY 94 and FY 95 to $3,341,000 has been judiciously targeted to ecosystem management as mandated. These funds have leveraged significant state and local level investment and currently enable 22 states to implement professional continuing education programs for natural resource professionals to increase private landowner's understanding and to implement new technologies for addressing landscape environmental problems. We regret that RREA funds for FY 97 were reduced from $3,341,000 in FY 95 to $3,291,000 in FY 97.

TWS recommends that the Renewable Resources Extension Act be funded at a minimum level of $9.5 million in FY 97. RREA has been reauthorized to the year 2000. TWS supported and appreciated the $1,000,000 increase proposed by the Administration for RREA in the investment proposals section in FY 94, later reduced to $500,000 and sustained for FY 95. Even this small increase enabled 13 multi-state, regional or national forest ecosystem management projects to be implemented. When apportioned to State Extension Services, these funds have been effectively leveraged with cooperating partnerships at an average of about three to one, with a focus on dissemination of educational programs to private landowners (rural and urban), and continuing education of professionals.

The Society notes that $15 million has been recommended in the President's budget for pest management and $3.411 million for sustainable agriculture. TWS recommends not less than 20 percent of the total appropriation for pest management and sustainable agriculture should be dedicated to vertebrate pests (wildlife damage management) educational programs, and to restoring, managing, and sustaining the environment and the Nation's natural resource base upon which the agricultural economy depends.

SUMMARY

The Wildlife Society, therefore, recommends an increase in funding for the Renewable Resources Extension Act to $9.5 million for 1997. We encourage review of the progress made in implementing the 1991-1995 RREA Plan, as mandated by Congress. We further recommend that of the Pest Management and Sustainable Agriculture increase, not less than 20 percent be dedicated to programs for preventing and reducing vertebrate pest losses and sustaining a viable natural resource base upon which sustainable agriculture depends. The Society recommends that a four percent increase in Smith-Lever 3(b&c) funds be requested, of which not less than 35 percent of the total increase would be used to support the NREM and Environmental Stewardship Education Program objectives. Finally, we are pleased to note that 10 National Research Initiatives grants in 1995 from Cooperative State Research Service funds were awarded to support wildlife and natural resource studies amounting to over $1.4 million. The Society recommends consideration for expanding these environmental research needs in the FY 97 budget. Such an increase will:

- Enable the Extension System to accomplish the goals and objectives outlined in the RREA 1991-1995 Report to Congress;
- Significantly strengthen educational outreach for National Initiatives and targeted natural resource programs, including the NREM Program;
- Facilitate the development of effective programs to address current and emerging environmental issues, e.g. regional, in-service training for public issues education on wetlands and endangered species;
- Advance the level of understanding and implementation of sustainable natural resource technologies and management practices;
- Further implement the 1985 and 1990 Farm Bill conservation provisions and define opportunities and grass roots needs for implementation of the 1996 Farm Bill;
- Increase interdisciplinary capacity for forest ecosystem and conservation of biodiversity educational programs on an ecoregion level;
- Enable Extension to expand its capability to assist over 500,000 private landowners annually to improve decisionmaking and land management on an additional 35 million acres while increasing productivity and revenue by $200 million; and
- Help address critical natural resource and environmental problems essential to natural resource and agricultural sustainability.

LIST OF WITNESSES, COMMUNICATIONS, AND PREPARED STATEMENTS

Page

American Association of Nurserymen, prepared statement 4
American Association of Retired Persons, prepared statement 9
American Farm Bureau Federation, prepared statement 12
American Forest and Paper Association, prepared statement 19
American Indian Higher Education Consortium, prepared statement 24
American Sheep Industry Association, prepared statement 29

Barnett, Jack A., executive director, Colorado River Basin Salinity Control Forum, prepared statement 56
Barry, Peter J., director, Center for Farm and Rural Business Finance, et al., prepared statement 96
Batterson, Dr. Ted R., director, North Central Regional Aquaculture Center, prepared statement 213
Berg, Norman A., Washington, DC, representative, Soil and Water Conservation Society, prepared statement 233
Bier, Dennis, M.D., director, Children's Nutrition Research Center, prepared statement 46
Boyd, James D., executive officer, California Air Resources Board, et al., prepared statement 38
Brisco, Lavo, president, Livestock Marketing Association, prepared statement 114
Brown, Dr. J. Larry, director, Center on Hunger, Poverty and Nutrition Policy, prepared statement 41
Browning, Dr. Charles B., chair, Fiscal Year 1997 Committee, National Association of State Universities and Land-Grant Colleges, prepared statement 123
Bye, Raymond E., Jr., associate vice president for research, Florida State University, prepared statement 76

California Farm Bureau Federation, prepared statement 35
Campion, Dennis, Illinois Cooperative Extension Service, prepared statement 95
Casey, Timothy M., acting executive dean of agriculture and natural resources, Rutgers, the State University of New Jersey, prepared statement ... 224
Coalition on Smoking OR Health, prepared statement 53
Coffey, Joseph D., chairman, Council for Agricultural Research, Extension, and Teaching, prepared statement 63
Colorado State University, prepared statement 58
Curl, Dr. Sam E., dean, College of Agricultural Sciences and Natural Resources, Texas Tech University, prepared statement 247

Donald, Dr. Samuel L., regional research director, 1980 Land-Grant Colleges and Universities, prepared statement 70
Donnelly, Thomas F., executive vice president, National Water Resources Association, prepared statement 194

Fassett, Gordon W., Wyoming State engineer, prepared statement 57
FDA Council, prepared statement 73
Fender, Douglas H., executive director, Turfgrass Producers International, prepared statement 243
Firebaugh, Dr. Francille M., dean, New York State College of Human Ecology, Cornell University, prepared statement 138
Fond du Lac Band of Lake Superior Chippewa, prepared statement 78

Page

Franklin, Thomas M., wildlife policy director, the Wildlife Society, prepared statement 256

Gainesville, FL, city of, prepared statement 80
Guest, Richard T., Ph.D., Office of IR–4, Cook College/New Jersey Agricultural Experiment Station, prepared statement 228

Hall, John R., president, National Utility Contractors Association, prepared statement 187
Harper, Dr. David, Holden's Foundation Seeds, Inc., prepared statement 82
Hiler, Dr. Edward A., vice chancellor, agriculture and life sciences, Texas A&M University, prepared statement 244
Hollis, Steven M., president, Local 3354, American Federation of Government Employees, prepared statement 16
Holveck, David P., president and CEO, Centocor, Inc., prepared statement 43
Hood, Suzy, I Care, prepared statement 95
Hougart, Bille, the Oceanic Institute, prepared statement 198
Hummer, Dr. Paul D., associate dean of academic programs, Oklahoma State University, prepared statement 135

International Apple Institute, prepared statement 105

Jefferson, Merle, director, Department of Natural Resources, Lummi Indian Business Council, prepared statement 115
Jones, Richard G., chairman, National Watershed Coalition, prepared statement 190

Kitchen, Newell, University of Missouri-Columbia, prepared statement 1

Lassoie, Dr. James P., research chair and professor, Department of Natural Resources, Cornell University, prepared statement 141
Lawrence, Francis L., president, Rutgers, the State University of New Jersey, prepared statement 222
Lynn, Naomi B., chancellor, University of Illinois at Springfield, prepared statement 104

Maguire, John, vice president, Washington operations, National Cotton Council of America, prepared statement 157
Main, Dr. Kevan L., director, Center for Tropical and Subtropical Aquaculture, Regional Aquaculture Centers, prepared statement 207
Maizel, Margaret S., principal investigator, National Center for Resource Innovations, prepared statement 150
Merja, Chuck, president, National Association of Wheat Growers, prepared statement 145
Mossinghoff, Gerald J., president, Pharmaceutical Research and Manufacturers of America, prepared statement 205
Myers, Lester W., president and general manager, Delta Western, Inc., prepared statement 209

National Association of State Foresters, prepared statement 120
National Easter Seal Society, prepared statement 162
National Telephone Cooperative Association, prepared statement 184
Northwestern University, prepared statement 195

O'Neal, John F., general counsel, National Rural Telecom Association, prepared statement 175
Oliver, Jim, general manager, Tarrant County Water Control and Improvement District, prepared statement 241
Organization for the Promotion and Advancement of Small Telecommunications Companies, prepared statement 199
Organization of Professional Employees of the Department of Agriculture, prepared statement 202
Owens, John C., dean and chief administrative officer, College of Agriculture and Home Economics, New Mexico State University, prepared statement 33

Pacelle, Wayne, vice president, government affairs, Humane Society of the United States, prepared statement 88
Palmertree, Dr. Hiram D., director, Cooperative Extension Service, Mississippi State University, prepared statement 132

Page

Pederson, Dr. Don, vice chancellor, academic affairs, University of Arkansas, prepared statement 50
Perrine, John D., Defenders of Wildlife, prepared statement 66
Peterson, R. Max, executive vice president, International Association of Fish and Wildlife Agencies, prepared statement 109
Prato, Tony, University of Missouri-Columbia, prepared statement 1
Prewett, Ray, National Citrus Research Council, prepared statement 153

Rapoza, Robert A., executive secretary, National Rural Housing Coalition, prepared statement 171
Raybould, Jeff, vice president, National Potato Council, prepared statement ... 167
Rheault, Dr. Robert, interim executive director, Northeastern Regional Aquaculture Center, prepared statement 212
Rosenberg, Dr. Irwin H., director, Human Nutrition Research Center on Aging, Tufts University, prepared statement 85
Rural Coalition/Coalición Rural, prepared statement 216

Schram, Susan G., Ph.D., food and agriculture program coordinator, Consortium for International Earth Science Information Network, prepared statement 60
Shaner, Gregory, chairman, National Oat Improvement Committee, prepared statement 166
Shea, Ernest C., executive vice president, National Association of Conservation Districts, prepared statement 117
Shepherd, Dr. C.G., director, Southern Regional Aquaculture Center, prepared statement 214
Shows, Thad, National Rural Water Association, prepared statement 179
Shult, Dr. Milo J., vice president for agriculture, University of Arkansas System, prepared statement 130
Simpson, Ocleris, dean, agriculture research and extension, Langston University, prepared statement 240
Spencer, Dr. Richard, limited partner, Hawaiian Marine Enterprises, prepared statement 210
Stapleton, Maureen A., general manager, San Diego County Water Authority, prepared statement 232
Stephens, Norman, president, Lincoln Land Community College, prepared statement 104
Stroope, Jerry, president, American Honey Producers Association, Inc., prepared statement 23
Stukel, James J., president, University of Illinois, et al., prepared statements 99, 102

Thames, Dr. Shelby F., distinguished university research professor, University of Southern Mississippi, prepared statement 237

U.S. Agricultural Export Development Council, prepared statement 250
United States Telephone Association, prepared statement 253

Wodraska, John R., general manager, Metropolitan Water District of Southern California, prepared statement 116
Woosley, Dr. Raymond, professor and chairman of the Pharmacology Department, Georgetown University Medical Center, prepared statement 81

Yopp, Dr. John, associate vice chancellor, academic affairs and research, Southern Illinois University at Carbondale, prepared statement 91

Zepp, Alan P., vice president, Government relations, National Cooperative Business Association, prepared statement 155

○

BOSTON PUBLIC LIBRARY
3 9999 05570 714 3

ISBN 0-16-053983-8
90000
9 780160 539831